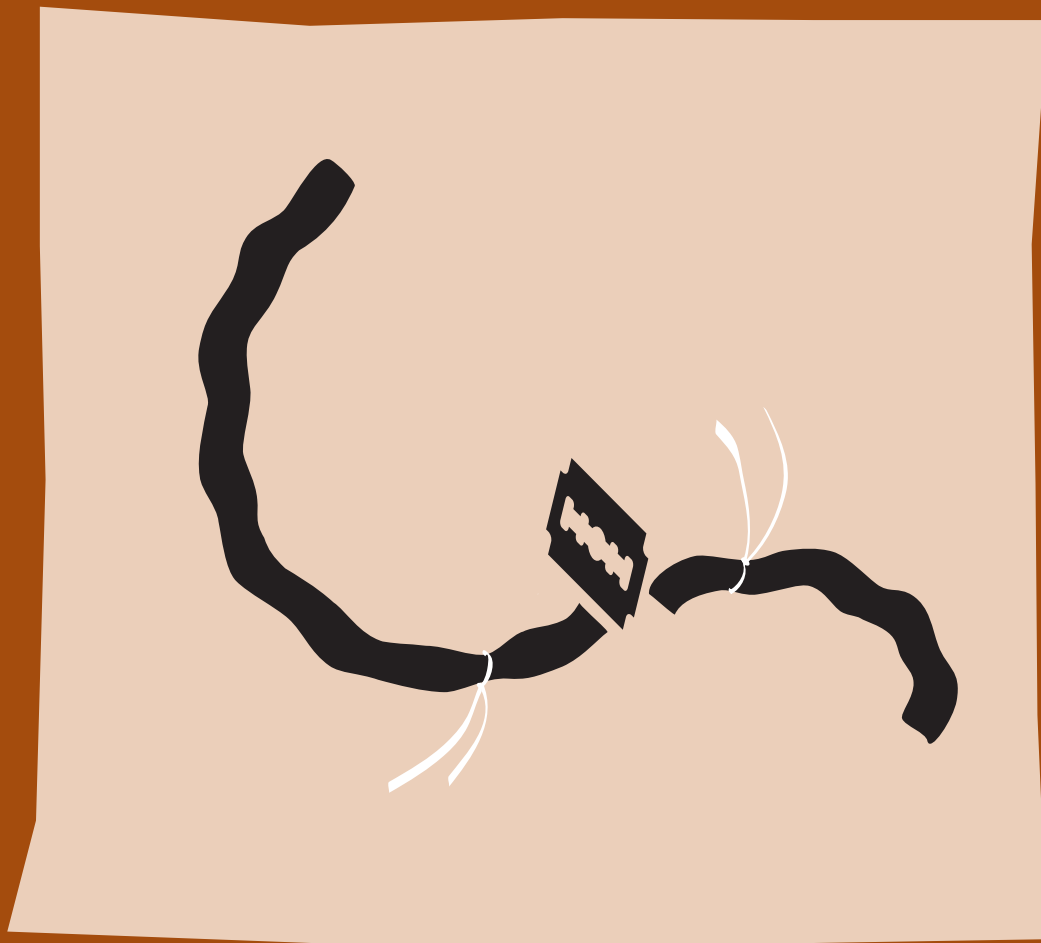


BASIC DELIVERY KIT GUIDE



BASIC DELIVERY KIT GUIDE



August 2001

path

Program for Appropriate Technology in Health

PATH's COMMITMENT TO IMPROVING CLEAN DELIVERY PRACTICES

Program for Appropriate Technology in Health's (PATH's) primary mission is to improve health, especially the health of women and children. Since 1988, PATH has collaborated with ministries of health (MOHs) and nongovernmental organizations (NGOs) in Nepal, Bangladesh, and Egypt to improve clean delivery practices through basic delivery kit projects. These experiences—together with ongoing collaboration with international agencies and requests from NGOs and MOHs from all regions of the world—have revealed a profound need for a comprehensive resource that will assist maternal and child health (MCH) managers in developing culturally appropriate, effective, and sustainable basic delivery kit projects.

The *Basic Delivery Kit Guide* is an in-depth resource that will aid in developing delivery kit projects. Throughout the *Basic Delivery Kit Guide*, we emphasize that delivery kit projects are one component of comprehensive safe motherhood and clean delivery programs. They cannot be sustained without being initiated within the community and integrated into larger maternal and child health programs. Hopefully, as part of these programs, basic delivery kit projects will reinforce programs to reduce maternal and neonatal tetanus, puerperal sepsis, and umbilical cord infection.



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PATH gratefully acknowledges the following World Health Organization (WHO) documents on which significant sections of the *Basic Delivery Kit Guide* are based:

- World Health Organization (WHO). “Clean Delivery Techniques and Practices for Prevention of Tetanus and Sepsis: A Guide for District Programme Managers.” WHO/MSM/CHD94.2, Division of Family Health, WHO: Geneva (1994); and
- WHO. “Clean Delivery Techniques and Practices for Prevention of Tetanus and Sepsis: Guidelines for Establishing Disposable Delivery Kit Assembling Units.” WHO/MSM/CHD94.4, Division of Family Health, WHO: Geneva (1994).

Additional documents that greatly contributed to the *Basic Delivery Kit Guide* include program reports from Maternal and Child Health Products Pvt., Ltd. (MCHP) in Nepal, the Christian Commission for Development in Bangladesh (CCDB), and Save The Children/US in Nepal. These NGOs have developed and maintained extremely effective national delivery kit programs; their experiences and lessons learned were invaluable to the development of this document.

PATH would like to acknowledge the efforts of Barbara Crook, principal author of the *Basic Delivery Kit Guide*, and Donna Robinett for their years of commitment to maternal and child health, and specifically, to clean delivery kit projects in numerous countries.

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LIST OF ACRONYMS

BCC	behavior change communication
CBO	community-based organization
FGD	focus group discussion
IDI	in-depth interview
IEC	information, education, and communication
MCH	maternal and child health
MOH	Ministry of Health
NGO	nongovernmental organization
PATH	Program for Appropriate Technology in Health
TBA	traditional birth attendant
TT	tetanus toxoid
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VSO	voluntary services organization
WHO	World Health Organization

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INTRODUCTION

Purpose of the *Basic Delivery Kit Guide*

Enhanced use of clean delivery practices in homes and maternity facilities can improve maternal and neonatal health in low-resource settings. To facilitate clean delivery practices, PATH has produced the *Basic Delivery Kit Guide*. Designed for maternal and child health (MCH) managers who wish to develop a basic delivery kit project as one component of their integrated MCH program, this guide provides comprehensive and practical information on the design, development, distribution, and promotion of single-use, disposable delivery kits. Work tools and case studies have been provided to further aid the development of basic delivery kit projects.

Basic Delivery Kits

The major focus of this guide is the single-use, disposable delivery kit containing essential components for clean delivery. For the purpose of clarity, this kit is referred to throughout the guide as the *basic delivery kit*.

Basic delivery kits can increase awareness and use of clean delivery practices. The kits are designed for use in the home by untrained and trained birth attendants (TBAs) and women delivering alone. Basic delivery kits contain supplies that are essential for supporting clean delivery practices and providing clean cord care immediately after birth. While basic delivery kits are designed for use in the home, they can also be used in resource-poor medical facilities such as health posts or health centers.

Basic delivery kit projects should be considered one component of a comprehensive safe motherhood program. In addition, the basic delivery kit should complement and be closely integrated with clean delivery programs and tetanus toxoid immunization programs in a combined effort to reduce maternal and neonatal tetanus and sepsis.

Contents of the *Basic Delivery Kit Guide*

The guide is divided into seven sections and an appendix:

- Section 1: Background
- Section 2: Deciding Whether to Develop a Basic Delivery Kit Project
- Section 3: Planning a Basic Delivery Kit Project
- Section 4: Kit Assembly

- Section 5: Kit Distribution and Promotion
- Section 6: Sustaining and Evaluating Basic Delivery Kit Projects
- Section 7: Recommendations and Conclusion

Sections 2, 3, 4, and 5 are followed by a set of work tools that kit project managers can use to design and implement the basic delivery kit project. These tools include focus group and interview guides, worksheets, procurement information, training curricula, and sample work plans. Many are either general guidelines or examples from specific countries, and may be adapted to meet local needs. Most of the instruments have been tested and used in actual basic delivery kit projects.

Examples from the field have been incorporated into the text.

How to Use This Guide

To maximize its utility, the *Basic Delivery Kit Guide* has been designed to be adapted to a range of program needs. While the guide focuses on large or national-level delivery kit projects, it can be adapted and applied to smaller projects on district or provincial levels.

- Managers of large-scale delivery kit projects will benefit from reviewing each of the guide's sections. They may find the step-by-step guidelines and work tools particularly useful. The work tools can be used as the basis for a workshop to help MCH managers decide if local kit development is appropriate, or as instruments for a series of workshops to orient kit project development once the decision to produce kits has been made.
- Projects focusing on one or two health districts may wish to adapt sections, especially the work tools, to meet their specific projects needs. For example, smaller delivery kit projects may choose to limit the scope of activities by cutting out some phases of research, or by contracting with other agencies to conduct marketing, distribution, or retail activities.
- Professional organizations and academic programs may find the case studies useful as reference materials.

The manner in which the guide is used depends on the individual program manager and the objectives and resources of their clean delivery program.

BACKGROUND

1



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SECTION 1

BACKGROUND

SUMMARY

Section 1 provides background information on the global incidence of maternal and neonatal tetanus, puerperal sepsis, and cord infection. These problems are directly related to unclean delivery practices, including use of unclean cord-cutting instruments and placing substances on the cord after cutting. In addition, the section provides information on:

- the ways in which basic delivery kits help alleviate these problems by supporting clean delivery practices;
- three types of kit financing, including fully subsidized, partially subsidized, and commercial kits;
- different types of delivery kits, including single-use, disposable kits, UNFPA and UNICEF kits, pre-assembled kits, TBA kits, and non-assembled kits.

This manual focuses on the basic delivery kit—a single-use, disposable kit intended primarily for home use.

1.1 THE PROBLEM

Maternal Mortality and Morbidity

Each year more than 600,000 women die from complications during pregnancy and childbirth.¹ On average, there are as many as 480 maternal deaths per 100,000 live births in developing countries.² Of these maternal deaths, 15 percent (90,000 women) result from puerperal infections, including 5 percent (30,000 women) from tetanus (Figure 1).^{1,3} The incidence of both puerperal infections and tetanus can be reduced through clean delivery practices.

Neonatal Mortality and Morbidity

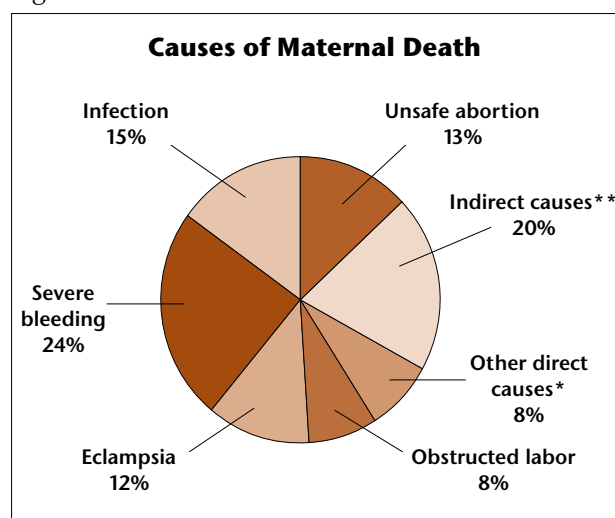
Approximately nine million infant deaths occur each year. Of these, over half (53 percent) are neonatal, meaning that they occur during the first four weeks after birth, and more than one third (3.2 million) occur within the first week of life. Many of the neonatal deaths that take place after the first week result from events occurring during the period immediately before and after birth.⁴

Tetanus and other infections are among the leading causes of neonatal mortality. According to the World Health Organization (WHO), 33 percent of all neonatal deaths are attributed to infections—principally neonatal tetanus and sepsis.¹ Each year some 440,000 infants die of neonatal tetanus and other severe bacterial infections.⁴

Infants with neonatal tetanus often have a concomitant cord infection caused by unclean delivery or unclean cord care practices.⁵ While increasing tetanus toxoid (TT) immunization coverage of pregnant women is the most effective way to reduce maternal and neonatal deaths that result from tetanus, TT vaccine provides no protection against other bacterial infections transmitted by unclean delivery practices.⁴

One of the main factors contributing to the high incidence of neonatal and maternal tetanus and sepsis is that the majority of deliveries take place under unclean circumstances.⁵ Globally, almost two-thirds of births occur at home, and only half are attended by traditional birth attendants (TBAs).⁶

Figure 1.



*Other direct causes include, for example: ectopic pregnancy, embolism, anaesthesia-related complications.

**Indirect causes include, for example: anaemia, malaria, heart disease.

Source: PATH. "Safe Motherhood: Successes and Challenges." *Outlook* 16:1,6 (July 1998).

Most Birth Attendants Have No Training

Each year an estimated 60 million women give birth with the help of an untrained TBA or family member, or with no help at all. Often the birth attendant is a relative or neighbor. In developing countries, an estimated 50 percent of deliveries are conducted by untrained TBAs who are poorly equipped to conduct the delivery.⁷ While TBAs are committed to positive delivery outcomes and perform some beneficial practices, they may unknowingly use harmful traditional practices. In addition, they may not have access to clean water or the supplies necessary for clean delivery.⁵ Infants delivered at home without a TBA and without hygienic precautions are at particular risk for tetanus and sepsis infections, as are their mothers.⁸

Basic Delivery Kits Must Be Part of a Comprehensive Strategy

Based on the conclusions of quantitative research in 1998 of a basic delivery kit in Nepal, PATH advocates “ . . . where unhygienic practices are widespread, inexpensive basic delivery kits designed to suit local needs and tastes can contribute to a reduction in infection. . . . If clean cutting implements are already used, special kits may not add much benefit. Although management of cord cutting is a critical step, what is put on the cord afterward in terms of foreign substances or cloth dressings is also important. The kit can provide the necessary components to make compliance with hygiene messages easier, but its value can be reduced if it is not part of a comprehensive strategy to reduce obstetric and newborn complications.”⁹

In home deliveries where a trained provider assists, the provider usually is a TBA. Training TBAs in clean delivery techniques and the correct use of basic delivery kits can help improve delivery outcomes. Governmental support of clean delivery practices and training of TBAs is key to the success of this effort. In Nepal, Kenya, and Zimbabwe, for example, ministry of health (MOH) policies require that TBAs use basic delivery kits during home births.

1.2 IMPROVING THE SITUATION

Safe Motherhood Initiative

The Safe Motherhood Initiative was launched in 1987 by an alliance of international agencies committed to improving maternal health and reducing maternal mortality worldwide. The member agencies work together to raise awareness, set priorities, implement research and interventions, and share information. Specific program priorities identified by the Safe Motherhood Initiative include having: (1) skilled attendants present at birth; (2) access to midwifery care in the community; (3) access to essential

obstetric care, including emergency services; (4) provision of integrated reproductive health care; and (5) a continuum of care.¹⁰

The initiative's community focus is on behavior change strategies urging prevention of infection and clean delivery practices. This includes the reduction of harmful traditional practices, upgrading equipment in delivery rooms, and promotion of community-based health education activities. One way of supporting clean delivery practices in the community is the development of clean delivery programs that raise the awareness of local leaders, mothers, and pregnant women and their partners. Delivery kit projects can be developed as one component of integrated safe motherhood and clean delivery programs.

Reducing Tetanus and Other Infections

According to WHO, the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF), in order to eliminate maternal and neonatal tetanus, it is essential that:

- three doses of TT vaccine be administered to at least 80 percent of all women of childbearing age in high-risk areas, and
- clean delivery practices be promoted and emphasized through health education.¹¹

Tetanus elimination is a two-pronged approach—immunizing women with TT and improving clean delivery practices.¹¹ The two interventions must be consistently integrated within maternal and child health (MCH) programs.

Additional protection of women from puerperal infection, and newborns from sepsis and cord infection, can be provided by:

- improving clean practices and ensuring clean equipment in health facilities;

Principles of Clean Delivery

According to WHO's Six Principles of Cleanliness at Birth, "The hands of the birth attendant must be washed with water and soap, as well as the perineum of the woman. The surface on which the infant is delivered must be clean.

Instruments for cutting the cord and cord care (razor blade, cutting surface, cord ties) should be clean. Nothing should be applied either to the cutting surface or to the stump. The stump should be left uncovered to dry and to mummify."

The six principles of cleanliness include:

- clean hands;
- clean perineum;
- nothing unclean introduced into the vagina;
- clean delivery surface;
- clean cord-cutting instrument;
- clean cord care (including cord ties and cutting surface).⁶

- improving clean practices in home deliveries by supporting the use of simple, disposable delivery kits; and
- promoting clean delivery messages in communities.⁶

The Cord Is Key

According to WHO, clean delivery and cord care mean observing principles of cleanliness throughout labor and delivery, and after birth until the separation of the cord stump.⁶ Clean cord care includes washing hands with clean water and soap before delivery, laying the newborn on a clean surface, washing hands again before tying and cutting the cord, cutting the cord with a clean instrument, and clean stump care.⁵

Cord infections frequently result from a lack of hygienic cord-cutting practices or inadequate care of the cord stump. Unclean household items such as scissors, knives, sickles, stones, broken glass, or used razor blades often are used to cut the cord. Because these items seldom are cleaned or boiled before use, they are likely sources of infection. While some cultural traditions—such as heating the knife over a fire before cutting the cord—may be beneficial, others are detrimental. For example, in areas of Malawi, the cord is cut using a peel from bamboo, reed, or sugarcane.¹²



Cord care is key to good neonatal care.

To maintain a clean cord stump, the cord stump must be kept dry and clean. In addition, nothing should be applied to the stump; antiseptics are not needed for cleaning. In many cultures, unclean substances are traditionally placed on the cord stump. In Blantyre, Malawi, for example, untrained TBAs use their fingers to apply pressure to the cord, while in Nsanje, Malawi, untrained TBAs put rat, rabbit, or chicken feces, or dirt from the floor on the cord stump to prevent bleeding. To facilitate the healing process, substances such as salt, soot, juice from banana shoots, and spider's webs also are placed on the umbilical stump.¹² Harmful practices such as these should be discouraged and replaced with an acceptable substitute.⁶

While clean delivery practices help lower the incidence of delivery-related infections, they do not affect postpartum infections caused by pre-existing reproductive tract infections in pregnant women.¹³ Reproductive tract infections such as gonorrhea are a common cause of sepsis. To prevent the advancement of infection, pregnant women should be screened and treated for these infections during prenatal visits.

1.3 KITS CONTRIBUTE TO CLEAN DELIVERY

Why Are Delivery Kits Important?

Delivery kits are one important step to improving clean delivery practices within integrated maternal and neonatal health programs. Delivery kits have several key objectives. When introduced as part of clean delivery programs, they contribute to the:

- promotion of clean delivery practices;
- reduction of maternal sepsis;
- reduction of neonatal tetanus, sepsis, and cord infection;
- reinforcement of maternal and newborn health programs; and
- provision of a convenient source of clean supplies.

In the home, supplies needed to conduct a clean delivery often are not available. Even where reusable delivery kits are used by trained TBAs, the instruments are seldom cleaned between deliveries, and necessary supplies such as clean cord ties may not be restocked.

Clean Home Delivery Kit in Banjura, Nepal

The arrival of the Clean Home Delivery Kit and its promotion and distribution through CARE's activities in Banjura has brought a considerable increase in the level of awareness of cleaner and safer deliveries, as well as actual behavioral change such as the use of a clean razor blade rather than a sickle for cord cutting.¹⁴

WHO states that "The use of simple, disposable delivery kits will help achieve as clean a delivery as possible." To this end, WHO recommends that a delivery kit should contain, at a minimum:

- a piece of soap for cleaning hands and perineum;
- a plastic sheet of about one square meter to provide a clean delivery surface;
- a clean razor blade for cutting the umbilical cord; and
- clean cord ties.

These materials should be packaged in a box or sealed plastic bag with illustrated instructions on how to wash hands thoroughly before delivery and again before handling the infant's umbilical cord, and on how to use other items in the package.⁶ The pictorial instructions are key to reinforcing clean techniques such as hand washing and to guiding correct use of kit components by kit users of all literacy levels.

The immediate benefits of supplying the essential items in one kit are:

- All the essential items are conveniently available at the time of delivery, decreasing the likelihood that unclean items will be used.
- All the materials are new, clean, and provided in adequate quantities.
- The use of single-use, disposable delivery kits by trained midwives may enhance the credibility of the kits in the community and encourage wider acceptance and use.

Long-term Impact on MCH Outcomes

Along with training of TBAs and community health workers in the correct use of the kit, the introduction of a basic delivery kit into an integrated MCH strategy can result in important long-term outcomes including:

- increased awareness of the importance of clean delivery practices by various kit users;
- increased number of clean deliveries;
- decreased incidence of cord infection that results in morbidity and mortality;
- improved links between health workers and TBAs;
- increased registration of pregnancies and births;
- monitoring of birth outcomes;
- introduction of income-generating activities; and
- financial incentives for TBAs.

Other long-term outcomes or benefits of kit introduction may become apparent over time. For example, kit introduction may encourage increased antenatal care visits or prompt increased referral of high-risk pregnant women to antenatal care due to increased TBA knowledge and awareness from training.

Impact of Locally Developed Kits on the Community

In India, a 1991 case study by the Rural Women's Social Education Centre (RUWSEC) on the development and use of kits showed that "[i]mpact of the use of simple delivery kits on health was . . . unexpected . . . the interaction between pregnant women and the workers of RUWSEC resulted in a heightened awareness of the need for special care during pregnancy and preparation for delivery."¹⁵

Including Men in Delivery Kit Projects

Men play a critical role in the design, development, and sustainability of delivery kit programs. As village leaders, they are critical to community involvement. As husbands, fathers, and brothers of pregnant women, they often are invested emotionally in the outcome of deliveries. Within the family, men frequently are purchasers of household supplies and set priorities on the way scarce money is spent. They also may be distributors, wholesalers, or retailers of household supplies, including kits.

Because of this involvement, men should be included throughout the steps of a delivery kit project, such as:

- in the feasibility study, with respect to motivation to purchase;
- in the needs assessment, particularly with respect to kit price;
- as a key target group for promotional activities; and
- during the market test, if they are involved in the purchase and/or sale of the kits.

Men also should be included in awareness-raising efforts so they understand how basic delivery kits can contribute to the improved health of women and children.

Who Can Use Basic Delivery Kits?

Basic delivery kits can be used by mothers or anyone assisting with a delivery, including:

- mothers delivering alone;
- trained and untrained TBAs;
- occasional birth attendants such as relatives or neighbors; and
- midwives.



Men are major purchasers of delivery kits.



Mothers-in-law often assist in deliveries and are potential kit purchasers.

The use of basic delivery kits is becoming increasingly common in urban clinics and hospital settings that face severe shortages of supplies and equipment. In some situations, pregnant women purchase the kit during antenatal clinic visits and take the kit with them to the hospital for their deliveries.

1.4 TYPES OF DELIVERY KITS

Delivery kits come in many different forms. They may range from simple cord-cutting kits used by untrained attendants in which the primary component is a clean razor blade, to comprehensive kits designed for trained TBAs and midwives that contain many items including scissors, fetoscopes, sutures, anesthetics, and flashlights. Factors that determine the contents of the kit include:

- the type and training of kit users;
- site of kit use;
- financial resources available for developing the kit;
- traditional practices related to delivery;
- various emergency situations that require basic, conveniently packaged medical supplies;
- medical policy of the country or the agency developing the kit; and
- local availability of raw materials for kit components.

Kits for Home Use

The kits designed for home use are easy to use and convenient, especially for women who are not trained as birth attendants. At a minimum, the essential items in these kits include a razor blade for cutting the infant's umbilical cord, soap, cord ties, a plastic sheet, and pictorial instructions. The primary focus is clean cord care. Consequently, programs should not use the words "safe birth" to describe the basic delivery kit, because these kits do not address causes of neonatal and maternal mortality other than tetanus and sepsis.



Photo: JHU/CCP

Most women deliver at home alone.

Locally, these kits may be available through NGOs, MOH agencies, mothers' groups, small retailers, or directly from the TBA performing the delivery. If not locally available, these kits can be ordered through United Nations (UN) agencies such as UNFPA and UNICEF. (For ordering information, see Work Tool 2.5.) Most kits are fully or partially subsidized by NGOs or local governments.

EXAMPLE FROM THE FIELD: BURUNDI



In October 1995, the Ministry of Health (MOH) of Burundi and the United Nations Children's Fund (UNICEF) launched the Safe Home Delivery Assistance Program. The objective was to reduce the rates of postpartum infection and neonatal tetanus by improving hygiene of home births.

The program began in the southern province of Makamba, chosen because it had a high level of prenatal consultations at the time. Moreover, the health centers and personnel in Makamba were reliable, and supervision was possible because it was safe from effects of the civil war.

The program encouraged pregnant women to buy a delivery kit containing materials to use for births at home. Health center staff sold the kits only to women who sought prenatal screening and showed no significant health problems.

The women paid a token price (US\$0.25) for the kit, which was only one-third of the

actual market value. Health center staff used kit sale proceeds to cover transportation costs for obstetrical emergencies. This benefit contributed to community support of the home delivery kits.

In 1996, the program sold 2,000 kits, and eventually incorporated kit distribution into TBA trainings. Unfortunately, civil war in Burundi affected the province of Makamba and made it impossible to evaluate the program or to document lessons learned.

Despite the obstacles to evaluation, the MOH and UNICEF made supervisory visits and collected anecdotal evidence of kit users' and health workers' satisfaction. Based on these findings, program managers expanded the project to other provinces in Burundi.¹⁶

Kits for Use in Hospitals or Health Posts

Medical facilities are often presumed to have an adequate supply of clean delivery materials. In reality, such materials are frequently unavailable due to a general scarcity of supplies, poorly trained staff, or the pirating of supplies for use in non-obstetric services.

Although single-use, disposable delivery kits for home use have received considerable attention in recent years, hospitals and health posts also have a need for basic delivery kits—particularly kits that are designed for resource-poor facilities in both rural and urban areas.

TBAs Have Not Been Adequately Trained in Use of Their Delivery Kits

“In Pakistan, a 1986 study by UNICEF found that 31 percent of trained TBAs never carried their kits, and 21 percent carried them only some of the time. Similar reports come from India, Ghana, and Haiti. TBAs may not use their kits because they have not been adequately trained in use of all the items, because supplies run out, or because they consider them symbols of their training—like diplomas—and thus, more appropriately displayed than used. There are several solutions to these problems. Training courses should teach TBAs how to use everything in the kit. Also, if kits are made from local products, TBAs can restock them more easily . . . TBAs may be more likely to use the kits when clients provide them.”¹⁷

Kits for use in hospitals or health posts should be stored and maintained in secure areas. They can be reserved for use by medical providers during deliveries or sold to women in advance of need, such as during antenatal visits or when they present for delivery.

Kits for Use in Refugee or Emergency Situations

UNFPA has designed single-use, disposable delivery kits for use in refugee camps and emergency situations such as wars, floods, and earthquakes. These kits are easy to transport and distribute in difficult situations that may lack trained birth attendants.

Pre-assembled Kits for TBAs and Midwives

Pre-assembled delivery kits for trained TBAs and midwives are comprehensive kits used during home deliveries. The most common pre-assembled kits are those supplied by UNICEF for both trained midwives and TBAs at the completion of training programs. These kits include core, reusable components (such as metal bowls and scissors), and one-time-use supplies such as cotton balls, gauze, and cord ties, which require resupply. A kit

may be configured to contain the type and quantities of equipment best suited to a particular MCH program's needs; the midwifery kits described in the UNICEF catalog provide suggestions of possible combinations of kit components. They were designed so that the expendable supplies would be either replaced by country MCH programs or by the users themselves.

Unfortunately, the use of pre-assembled TBA and midwifery kits has been limited because:

- many items are not used, as TBAs and midwives fear losing or spoiling them, cannot afford to resupply them, or the items are not locally available;
- they are expensive, so not all TBAs or midwives receive them;
- some items are not used, as they are considered unnecessary for normal home delivery according to traditional practices, or because TBAs and midwives have not been adequately trained in their use;
- they are not made available to TBAs or occasional birth attendants who have not received formal training;
- it is difficult to keep the kit components clean, given the conditions in most villages; and
- equipment such as bowls or pans occasionally are taken for use in household chores.

Due to these limitations, the UN agencies have re-evaluated the design of their kits for TBAs and midwives, and are designing simpler, more economical kits for use in a variety of situations.¹⁸ These will replace the currently available kits in the near future. (See Work Tool 2.5, Ordering United Nations Kits.)

Non-assembled Kits

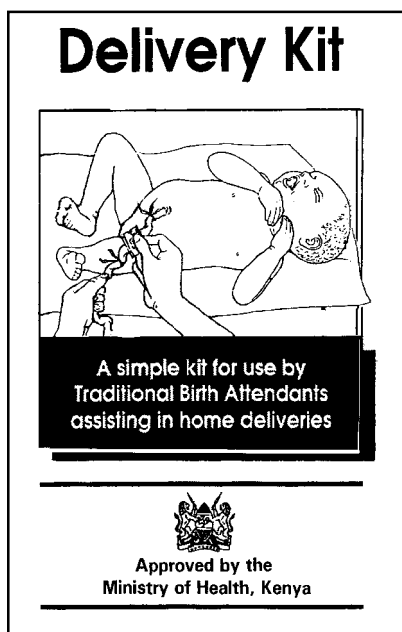
Rather than providing TBAs with pre-assembled kits, which may be costly or difficult to distribute, some NGOs provide instructions to women attending antenatal clinics regarding which items to gather for making their own single-use kit.

1.5 KIT FINANCING

The financing of basic delivery kits may be fully subsidized, partially subsidized, or commercial in nature.

Fully Subsidized Kits

Most single-use, disposable delivery kits are fully subsidized. NGOs include the costs of development, distribution, and promotion in their annual budgets. Communities that promote fully subsidized kits distribute them free of charge to midwives, TBAs, and community health workers, often through training events at their local agencies. Some NGOs require that their trained TBAs use the fully subsidized kits and provide them with a quota of kits every month. Pregnant women may receive them free of charge when they attend antenatal clinics.



Delivery kit subsidized by the MOH, Kenya.

While subsidizing kits may help ensure their availability in communities, the subsidy itself may be problematic. In addition to reducing the perceived value of the kit, it can become a financial burden on the agency. As donor priorities change and funding becomes scarce, sustainability becomes a challenge.

Partially Subsidized Kits

Partially subsidized kits are sold at a price that does not fully cover the costs of production, promotion, and distribution. The project requires partial subsidy, because the producing agency cannot fully recover the costs from users.

In order to compensate for these unrecovered costs, the agency develops a range of activities including:

- negotiating in-kind contributions for kit promotion such as radio and television advertisements from UNICEF or UNFPA;
- increasing kit production and sales through reducing and, thus, subsidizing prices to the consumer;
- collaborating with other NGOs or government agencies to purchase and distribute the kit as part of their programs; and
- allocating part of the agency's safe motherhood or child survival budget to support kit activities.

Much of the information in this guide refers to partially subsidized kits.

Commercial Delivery Kits

At a minimum, commercial delivery kit prices must cover all costs. They are sold to consumers at a price that ensures some profit to the producer. They are self-sufficient (i.e., not subsidized). However, the distribution and promotion efforts required for economic self-sufficiency are very time-consuming. There are few examples, if any, of successful, commercially viable, basic delivery kit projects. Basic delivery kit projects that are partially subsidized or commercial should be careful about “seeding” kits (that is, providing a limited number of free kits to generate awareness and interest in using the kit). When free kits are provided, people will expect them to continue to be free and will not want to pay for them. They may also value them less.

EXAMPLE FROM THE FIELD: CAMBODIA



To increase the probability of clean deliveries and to decrease maternal and neonatal morbidity and mortality in Cambodia, the Reproductive and Child Health Alliance (RACHA) and UNICEF sponsored the pilot testing of a Home Birth Kit. The pilot test took place in four provinces from May through August 2000, in collaboration with the National Maternal and Child Health Center. The results indicated a high demand for kits; high acceptability by rural women, midwives, and TBAs; and correct use of kit contents. The agencies found that the kit could be most effectively marketed commercially through pharmacies, drug shops, and small stores using wholesale distribution channels.

The program is growing rapidly, with plans to strengthen and expand distribution. The Home Birth Kit includes a plastic sheet, non-sterile gloves, a sterile blade, string cord ties, soap powder, a fingernail brush, gauze, gentian violet, a pictorial instruction sheet, and a TT educational message advising

women to seek TT immunization and antenatal care.

The kits are sold to TBAs, midwives, and Feedback Committee Members (village health volunteers) for use during outreach and private delivery visits to rural pregnant women who deliver at home. RACHA provides the kits to sellers who sell them for R3,000 (US\$0.77), a price that is deemed reasonable and affordable by users. Periodically, Home Birth Kit monitors visit these sellers to collect R2,500 (US\$0.64) for each kit sold and to resupply them with more kits (i.e., sellers keep a profit of R500 as an incentive). Kit production is still slightly subsidized, but the program is expected to become self-sufficient as larger quantities are produced.^{19,20} When the kit is endorsed by the Cambodian Ministry of Health, it can be included in the essential drug list and national distribution channels.

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DECIDING WHETHER TO DEVELOP A BASIC DELIVERY KIT PROJECT

2

SECTION 2

DECIDING WHETHER TO DEVELOP A BASIC DELIVERY KIT PROJECT

SUMMARY

Section 2 reviews the information program managers must consider when deciding whether to develop a basic delivery kit project, and how to determine whether a basic delivery kit project is an appropriate intervention for the identified MCH problem. It discusses:

- how to conduct a situation analysis;
- techniques of qualitative research; and
- the agency resources required to implement and sustain a basic delivery kit project, including staff, time, and financial resources.

2.1 DETERMINING NEED AND FEASIBILITY

The most fundamental step when considering development of a delivery kit project is to determine whether there is a need for a basic delivery kit. Maternal and child health (MCH) program managers should consider the specific ways in which the production and distribution of a basic delivery kit can help address the community's need and determine whether a basic delivery kit project would be appropriate and feasible.

Situation Analysis

To obtain this information, program managers should conduct a situation analysis consisting of a survey of key documents, community meetings, focus groups with traditional birth attendants (TBAs) and women who deliver at home, and in-depth interviews with key staff of nongovernmental organizations (NGOs) and ministry of health (MOH) MCH programs. It should be emphasized that this situation analysis is limited in scope. A limited number of focus groups and in-depth interviews should be conducted. These, in combination with the survey of key documents, will determine the need for a basic delivery kit project.

Survey of Key Documents

To assess the extent of maternal and neonatal problems and to determine what types of interventions have been used in the past, program managers should gather data on MCH indicators from the MOH, demographic health surveys, the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), NGO reports, and other relevant sources. These data can also be used to estimate the expected number of home deliveries per year.

Photo: JHU/CCP



Community meetings can be an important activity during the situation analysis.

Examples of MCH indicators and types of information that can be gathered in a checklist format include:

- Infection incidence

Maternal Indicators:

Puerperal sepsis is a common cause of maternal deaths: Yes ☐ No ☐

Maternal tetanus is a common cause of death: Yes ☐ No ☐

Neonatal Indicators:

Neonatal tetanus incidence is high: Yes ☐ No ☐

Umbilical sepsis incidence is high: Yes ☐ No ☐

- Birth rates in the target area.

Number of births per year: _____

Number of births per month: _____

Expected number of home deliveries per year: _____

- Other indicators:

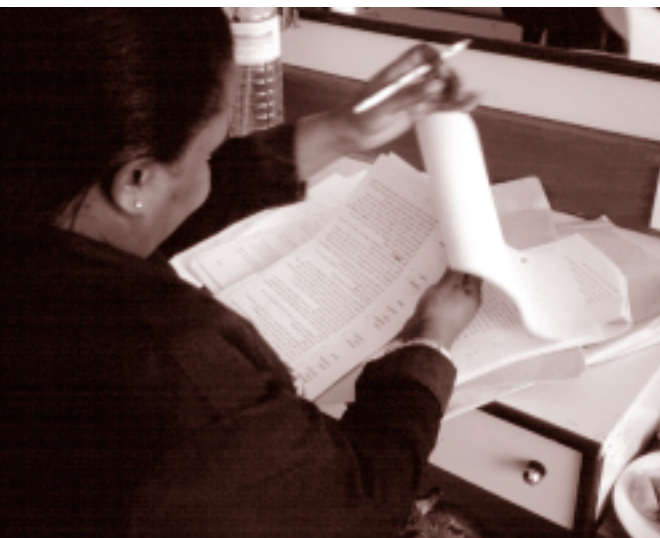
Percentage of women who have received TT immunization: _____

Percentage of deliveries that are conducted at home: _____

Many of the above indicators are significantly under-reported or not reported at all. Where this is the case, program managers should use qualitative research to substantiate the key maternal and neonatal issues.

Qualitative Research: Focus Group Discussions and In-depth Interviews

Qualitative research methods such as focus group discussions and in-depth interviews can help program managers gather data that are not available through existing documents. During this situation analysis, the focus groups and in-depth interviews should be limited in number, focusing on identifying the need for and feasibility of a delivery kit project. If the decision is made to develop a basic delivery kit project, more extensive qualitative research activities will be required



Analyzing qualitative data can be time-consuming, but it provides rich, useful information.

later during the needs assessment to gather more detailed information on kit user preferences, appropriate kit contents, and distribution channels (see Section 3). Work Tool 2.1 contains information about qualitative research techniques.

Qualitative research should be conducted with public health officials as well as members of the community:

- In-depth interviews with MOH and/or NGO staff can be used to determine their perception of local MCH problems and their opinions about introducing basic delivery kits as part of a clean delivery program. Program managers should interview NGOs already using delivery kits to learn about their experiences with the kit.
- Focus group discussions or in-depth interviews with women in the community can be used to explore existing knowledge, attitudes, and practices with respect to delivery and to assess potential demand for and feasibility of introducing a kit. The assessment should include mothers, health care personnel, and TBAs.

Program managers should use the focus groups and in-depth interviews to analyze the local situation through key issues such as:

- numbers of deliveries conducted at home;
- persons helping with delivery;
- traditional delivery process;
- understanding of “cleanliness” among TBAs and pregnant women;
- types of TBAs;
- how women delivering alone prepare for the birth;
- availability of basic equipment such as cord-cutting instruments, cord ties, water, and facilities to boil water;
- traditional equipment used in delivery;
- feasibility of introducing delivery kits;
- time needed to collect and boil material and equipment;
- logistics and community involvement; and
- availability of locally assembled kits or United Nations (UN) kits.

Topic guides for conducting focus group interviews or in-depth interviews with diverse individuals or groups can be developed to explore particular issues with each audience. Work Tool 2.2 provides a sample topic guide for interviewing NGO and MOH staff, and Work Tools 2.3 and 2.4 provide topic guides for conducting focus group discussions and in-depth interviews with TBAs and mothers.

Sample Checklist of Birth-related Practices Summary

Home delivery is very common; the majority of births occur at home.

Yes ☐ No ☐

Home delivery is not common; most births occur in the nearby clinic.

Yes ☐ No ☐

Untrained TBAs, relatives, or neighbors commonly assist in deliveries.

Yes ☐ No ☐

Hands are consistently washed with soap during the delivery process.

Yes ☐ No ☐

Standards of cleanliness at the time of delivery are poor.

Yes ☐ No ☐

A clean cloth is usually placed under the woman during delivery.

Yes ☐ No ☐

Boiled or new razor blades are commonly used to cut the cord.

Yes ☐ No ☐

Substances are commonly put on the cord after cutting.

Yes ☐ No ☐

Summarizing Data

To further the situation analysis, program managers should summarize the data from the survey documents, focus groups, and/or in-depth interviews. By reviewing the community's delivery practices and determining if they negatively affect maternal and neonatal outcomes, the MCH program managers have additional information on which to base their decision. A checklist similar to the one provided on this page should be used as a tool to highlight the issues and birth practices that indicate a need for a basic delivery kit project.

Once the qualitative data are summarized, the following questions should be used to further determine the need for incorporating a basic delivery kit into the existing MCH program.

Will basic delivery kits help resolve issues related to birth practices? **Yes ☐ No ☐**

MCH program managers must determine whether the introduction of a basic delivery kit would, in combination with TT immunization programs, help resolve some of the maternal and neonatal health issues. They may decide that basic delivery kits will help decrease rates of maternal and neonatal tetanus, puerperal sepsis, and cord infections by promoting and reinforcing clean delivery practices.

Would a delivery kit project enhance the MOH's safe motherhood goals? **Yes ☐ No ☐**

Once program managers have assessed their community's needs, they should develop a corresponding set of objectives for their project. These objectives can then be used to shape the design and approach of the basic delivery kit project.

2.2 WHEN BASIC DELIVERY KITS ARE ALREADY AVAILABLE LOCALLY

Once the need for basic delivery kits has been determined, and before an agency commits to developing a basic delivery kit project, it is important to determine what types of kits, if any, are already in the community. Locally developed kits may be available from the MOH, local NGOs, or through businesses that manufacture them.

If basic delivery kits are already available, developing a new delivery kit project may not be feasible. It may be more cost-effective and efficient to purchase the local kits. Even if the kits lack an important component (for example, pictorial instructions), it might be possible to buy the local kits in bulk and insert pictorial instructions and the agency’s logo and label. This is an important, cost-effective alternative.

Assessing Appropriateness of Existing Kits

Program managers should assess the appropriateness of existing kits within the local community. They may wish to interview NGO or MOH staff to address the following questions:

	Yes	No
Do the kits fit the MCH program’s needs?	<input type="checkbox"/>	<input type="checkbox"/>

For example, if most deliveries are conducted by TBAs or take place in the home and are unattended, UNICEF’s kits for trained midwives would not meet the community’s needs.

	Yes	No
Has the available kit been designed for the community’s typical user(s) and delivery sites?	<input type="checkbox"/>	<input type="checkbox"/>

For example, if women typically give birth alone at home, is the kit easy for them to use without assistance?

	Yes	No
Do the available kits fit well with local traditional birth practices?	<input type="checkbox"/>	<input type="checkbox"/>

For example, if the available kits contain antiseptic for the cord and a nail cleaner—but the traditional practice is to put nothing on the cord and most

women do not use nail cleaners—the kit is not well-suited to local birth practices and could be modified.

	Yes	No
Do the kit contents prevent traditional practices that may be harmful?	<input type="checkbox"/>	<input type="checkbox"/>

For example, kits that contain a clean razor blade may prevent the traditional practice of cutting the cord with a sickle or piece of bamboo.

	Yes	No
Are kits affordable?	<input type="checkbox"/>	<input type="checkbox"/>

Can most people afford to buy the available kit with their limited resources?

	Yes	No
Are kits available and accessible?	<input type="checkbox"/>	<input type="checkbox"/>

Can people buy them easily from local TBAs, community organizations, or retailers? If the kits are assembled in a distant location, do poor roads or weather affect distribution?

	Yes	No
Do women use the available kits easily and recommend them to friends and relatives?	<input type="checkbox"/>	<input type="checkbox"/>

If the kit is appropriate, accessible, and affordable, women will use it repeatedly and recommend it to others.



UNFPA and UNICEF delivery kits should be considered during the situation analysis.

If Delivery Kits Are Not Available In the Community, Should UN Kits Be Introduced?

If appropriate kits are not available in local communities, consider buying simple, disposable delivery kits through UN agencies such as the United Nations Population Fund (UNFPA) or UNICEF, and adapting them to local use. Several types of UN kits can be configured during the ordering process to meet the needs of specific country programs. In some situations, NGOs and MOHs buy large volumes of

delivery kits from UNICEF or UNFPA and distribute them through their MCH programs.

Key issues related to buying kits from UN agencies are **cost**, **shipping**, and **customs**. Program managers should review the total cost of ordering and maintaining the supply of UN delivery kits and, if necessary, adapting them for local use. They also should evaluate whether introducing UN kits is financially feasible and sustainable.

Work Tool 2.5 provides detailed descriptions and ordering information for several simple, disposable UNFPA and UNICEF delivery kits intended for use by untrained attendants.

2.3 ASSESSING PROGRAM RESOURCES TO DETERMINE FEASIBILITY

If existing, local, basic delivery kits are inappropriate or are unavailable, or if buying the kits from UN agencies is not affordable, MCH program managers must carefully assess their program's resources with respect to financial and staff resources, local collaborators, local availability of raw materials, and time. An assessment of these resources can determine if the basic delivery kit project is feasible and can be sustained.

Financial Resources

MCH program managers must determine whether their agency can afford the considerable start-up costs of a basic delivery kit project. MCH program managers also must decide whether the agency has sufficient ongoing funding, and whether it is willing to commit a percentage of those funds to maintaining a basic delivery kit project locally.

Substantial funds will be required to support the project's activities. Activities requiring financial support include—but are not limited to—the following:

- purchase of raw materials for kit components,
- purchase of packaging materials,
- printing costs,
- lease of assembly and storage space,
- salaries of staff who manage the project,
- salaries of assemblers who produce the kits,

- distribution of the kits to distant villages,
- development of media and printing of promotional materials,
- training seminars to introduce the kit to TBAs, and
- research to evaluate the impact of the kit.

Staff Resources

In addition to sufficient funding, the skills of project and assembly staff are critical to the success of a basic delivery kit project. Depending upon the size of the project, both project and assembly staff skills will be needed.

Project Staff Skills

- Qualitative research skills for conducting needs assessments, manufacturer's surveys, test markets, field trials, and information, education, and communication (IEC) and behavior change communication (BCC) activities that promote kit awareness.
- Ability to design and develop the kit components and packaging.
- Procurement skills for purchasing raw materials for basic delivery kit components.
- Social marketing skills for establishing promotional activities, distribution channels, and retail/wholesale sites.
- Training skills for setting up regional training for TBAs, kit assemblers, and supervisors.
- Ability to supervise, monitor, and evaluate project activities to ensure they are completed on time and positively impact MCH issues.

Kit Assembly Staff Skills

- For assemblers, the ability to assemble the kits according to quality assurance guidelines.
- For storeroom managers, the ability to maintain inventories and manage supplies.
- For supervisors and training staff, the ability to train, supervise, and monitor the assembly staff effectively.

If existing staff do not have these skills, it will be necessary to use consultants (such as market researchers) or to bring in technical assistance to train staff. In addition to having the required skills, staff or consultants must be free of other agency responsibilities and able to make a sizeable time commitment to this project.

Local Health Collaborators

The involvement of local agencies and the community is key to a program's success. MCH program managers should assess the level of available local support that can contribute to basic delivery kit project success and sustainability. The following questions help determine the level of local agency support:

- Are local NGOs or MOH district offices willing to collaborate on the introduction, promotion, and distribution of basic delivery kits?
- Do the local NGOs or MOH district offices provide training for TBAs and community health workers through which the basic delivery kits could be introduced and promoted?
- Are the local NGOs or MOH district offices willing to collaborate by providing their trained TBAs with the basic delivery kits and training them in correct use?

For larger or national delivery kit programs run by MOH or international agencies, program managers may want to establish a technical advisory committee to facilitate collaboration and project implementation. A technical advisory committee is an effective way to make sure that all key stakeholders are included in the planning process, allocate resources, share ideas and responsibilities, and advise project implementation.

Local Availability of Raw Materials

Buying raw materials to produce the kit components can be a costly and complex process. In local areas where raw materials (such as soap, razor blades, and thread) are not available, it may be necessary to transport the items from major cities or import them from other countries. Such activities may place the cost of the kit beyond the program's budget.

Time Resources

Before beginning a basic delivery kit project, the MCH program managers must determine whether they can commit a significant period of time to basic delivery kit project activities. A national project may require one year—and, possibly, two years—to develop, and this commitment will need to be sustained for several years thereafter. Small local projects may require less time.

2.4 MAKING THE DECISION

As previously outlined, there are many issues to consider when deciding whether it is feasible to develop a local basic delivery kit project. Conducting the situation analysis is critical, as the resulting data will provide the MCH program managers with the information they need to make an appropriate decision.

As an additional aid to decision-making, program managers should consider the following advantages and disadvantages of developing and sustaining a local basic delivery kit project:

Advantages of Locally Produced Basic Delivery Kits

- Establish local production, distribution, and promotion of kits to pregnant women.
- Distribution of basic delivery kits directly to families can help alleviate the problem of inadequately trained TBAs in rural areas.
- Kit contents can be designed to reinforce positive local or traditional practices.
 - Kits complement and strengthen the impact of TT immunization programs.
 - Kits can also:
 - increase awareness and implementation of clean delivery practices in the community;
 - make delivery supplies accessible to large numbers of people;
 - help decrease the financial burden on NGOs and governmental services through cost recovery;
 - reinforce TBA, midwife, and community health worker training on clean delivery practices;
 - strengthen women's income-generating organizations;
 - strengthen community involvement in health care;
 - encourage people to take responsibility for their own health care; and
 - support sustainability due to the personal commitment and economic incentives of local groups.

Local Development Issues

The use and effectiveness of basic delivery kits depend on their acceptability and appropriateness within their cultural environment. For this reason, local design, development, and production of the kits—whether commercial or fully subsidized—should be seriously considered. When designing a kit locally, kit developers should use qualitative research to understand traditional birth practices and attitudes toward birth, as well as decision-making processes regarding health care. It is critical to make the kit a part of the traditional delivery process.

Disadvantages of Locally Produced Basic Delivery Kits

- Initiating a basic delivery kit project requires a substantial level of funding for both initial and ongoing costs. Such a project also:
 - requires new skills that some project staff may not have or are not interested in learning;
 - results in expanded program activity that requires additional staff and the program manager's focused attention;
 - requires a serious, long-term financial commitment from the agency;
 - requires a long-term program commitment;
 - requires ongoing time commitment on the part of numerous staff in order to sustain the project; and
 - may direct resources or attention from the safe motherhood program agenda such as encouraging births with a skilled attendant.

2.5 FINAL CHECKLIST

The Final Four Questions

After carefully assessing the program's financial, community, organization, and staff resources, program managers should answer the four questions below:

	Yes	No
Would local production of basic delivery kits fit within the MOH's or NGO's policy to eliminate maternal and neonatal tetanus by promoting clean delivery?	<input type="checkbox"/>	<input type="checkbox"/>
Is the local community supportive of and involved in the local development of the basic delivery kit?	<input type="checkbox"/>	<input type="checkbox"/>
Are there sufficient resources within the agency to support development of a basic delivery kit project?	<input type="checkbox"/>	<input type="checkbox"/>
Are basic delivery kits currently unavailable either locally or through UN agencies?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer to all four questions is **yes**, consider developing a local basic delivery kit project.

Once the decision to develop a basic delivery kit project is made, the MCH program managers must designate a capable, available staff person to serve as the basic delivery kit project manager.

DECIDING WHETHER TO DEVELOP A BASIC DELIVERY KIT PROJECT

Work Tools

2

Adapt as needed for local circumstances.

2.1 QUALITATIVE RESEARCH: A BRIEF EXPLANATION

Qualitative research explores people's attitudes, thoughts, feelings, and traditional behavior toward a particular issue, and provides insight into the motivations for their behavior. Knowledge of these local beliefs and practices is essential to developing culturally appropriate, effectively promoted, and properly used basic delivery kits.

Staff experience in qualitative research skills is critical. Staff or consultants must be adept at conducting focus groups and in-depth interviews, analyzing data, and applying data outcomes to their program. If staff members want to conduct the research themselves and do not have these skills, they will require training and supervision.

Research techniques include focus group discussions, in-depth interviews, pretesting, and participant observation.

Focus Group Discussions

A focus group discussion is an in-depth discussion, guided by a facilitator, in which a small number of people (generally eight to ten) discuss their opinions, ideas, beliefs, and practices regarding a particular issue. These discussions seek to identify how and why people behave as they do.

In-depth Interviews

In-depth interviews are direct, face-to-face interviews with one to three people concurrently. They gather information from individuals, using open-ended and probing questions.

Pre-testing

Pre-testing involves testing a product (such as a basic delivery kit package) with a group of potential users to make sure the product is comprehensible, culturally appropriate, and acceptable. Pre-testing identifies characteristics that need to be revised or improved. Either focus groups or in-depth interviews can be used to pretest a product.

Participant Observation

Researchers observe, over time, the behavior and practices of a specific group of people for whom they are designing a health intervention.

2.2 INTERVIEW TOPIC GUIDE FOR NGO OR MOH STAFF WHO HAVE ALREADY DEVELOPED A LOCAL DELIVERY KIT

SITUATION ANALYSIS

Objectives

1. To gather information about delivery kit projects already developed by an NGO or MOH program staff.
2. To gather information on their experiences in developing the kit, its distribution, promotion, cost, use, and evaluation.

Contact Information

Name of NGO/MOH: _____

Address: _____

Telephone: _____

E-mail: _____

Person(s) interviewed: _____

Title: _____

Introduction

Introduce yourself and your agency. Explain that your agency is considering developing a basic delivery kit project and, because this is such a successful program, you are gathering information from many agencies before making your decision. Their experiences will help you in pursuing your own project. Be sure to note that you appreciate their time and willingness to discuss delivery kit projects.

Delivery Kit Design and Development

Questions can include the following:

- What is the name of your kit?

- Why did your agency decide to develop a delivery kit?
- What type of kit was developed?
- Who are the intended users?
- What are the primary and secondary sites for kit use?
- Is the kit fully subsidized, partially subsidized, or commercial?
 - If the kit is fully subsidized, who subsidized it? For what period of time?
 - If the kit is not fully subsidized, was it completely commercial or partially subsidized?
 - Where did the program managers obtain the funds to start the program?
 - Approximately how much did it cost to start the program?
 - What were the largest costs?

Kit Contents

- Please describe the contents of your kit.
- How did you decide on the contents of your kit?
- What is the source of each item and unit cost?
- Do you include pictorial instructions? If so, how were they designed?
- What is the cost per unit?
- How do you ensure the quality of the items in the kit?
- What type of packaging is used?
- Why did you decide to use this packaging?
- What are the advantages and disadvantages of different types of packaging (such as plastic, cardboard)?

Kit Development

- What type of research was conducted to design the kit?
- From which manufacturers do you purchase supplies?
- Do the manufacturers provide any subsidy for their products? If so, what motivates them?

Kit Assembly

- How many kits do you assemble? Over what time period?
- How and where are the kits assembled?
- Whom did you hire to assemble the kits?
- What is the cost of assembly and storage?
- What type of training and supervision do you provide to the assemblers?
- Where are the kits stored?
- Have you had any problems with storage? How you have solved those problems?
- How many kits do you normally have in stock?

Kit Distribution

- Who distributes the kits?
- Which geographical areas do they cover?
- To whom do they distribute the kits?
- How many kits are distributed each month?
- How are the kits distributed (e.g., on trucks, carts, buses)?

- Are the kits distributed free of charge, or is the distributor paid a commission?
- If the distributor is paid, how much is their commission?
- What types of wholesalers and retailers are supplied?
- Which health agencies are supplied?
- Do you sell kits to other agencies? If so, which agencies?
- How many kits do you sell to each agency?

Kit Cost

- What is the price of your kit (for example, wholesale, retail, to TBAs, and to health agencies)?
- How did you determine the price of your kit?
- Do different agencies pay different prices?
- Is the kit sold at the same price throughout the area? If not, what determines the different prices?

Kit Promotion

- How do you promote the kit (for example, at community meetings, orientations for TBAs, radio, or flyers)?
- Who is primarily responsible for kit promotion?
- Where does most of the promotion occur?
- How much does promotion cost? What are the major activities that increase costs?
- What are the key messages in your promotional activities?

Evaluation

- Have you evaluated the kit? If so, what type of evaluation was done?
- Please tell us about the evaluation results.
- What would you do differently, based on the evaluation results and your overall experiences with this program?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

2.3 FOCUS GROUP DISCUSSION TOPIC GUIDE FOR TBAs

SITUATION ANALYSIS

Target Audience

Traditional birth attendants (TBAs)

Objectives

- To identify the delivery experiences and clean delivery practices of TBAs.
- To determine the birth supplies and equipment commonly used by TBAs.
- To gather information about TBAs' opinions of delivery kits and their suggestions for kit packaging.

Site

Rural___ Urban___

Introduction

Introduce yourselves and your agency. Describe the objectives of the discussion.

Conduct a warm-up session. Informally, talk about children, pregnant women, agriculture, and other familiar matters.

Request that participants talk openly about their delivery experiences. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Ask permission to record them on a tape recorder. Explain that participants' answers will be kept confidential.

Have participants introduce themselves. At that time, take note of their names, ages, and number of infants delivered.

Delivery Experiences

Encourage all the participants to share their delivery experiences. Sample questions include the following:

- How many deliveries have you been involved with during the past two years?
- Whom have you assisted or advised during deliveries?
- What have been your roles and responsibilities during preparation for the deliveries?
- What do you charge, if anything, for your delivery services?

Clean Delivery Practices

- Please describe how you prepare for the delivery.
- Please tell us about the process you use during delivery.
 - What do you do to the cord?
 - What do you use to cut and tie the cord?
 - What do you use as a cord-cutting surface?
 - What do you do to the cord, if anything, after cutting?
- What does the expression “clean delivery practices” mean to you? What do you think clean delivery practices are? Please explain.
- If you prepare the delivery supplies for the delivery, what exactly do you do?

Delivery Supplies and Equipment

- We talked about the equipment used for cord cutting. What other supplies do you use during and after delivery?
- What do you consider the most important supplies for delivery?
- If soap is used during delivery, how is it used?
- Who decides what supplies should be purchased for delivery?
 - Who decides to buy them?

- Who actually buys them?
- Where are these supplies purchased?
- How difficult or easy is it to get them?
- How much is actually spent on these supplies?
- What do you think about putting all the essential supplies in one kit?

Feedback on Sample Delivery Kits

Present three different delivery kit samples to the participants. Start a discussion about the kits based on the following questions:

- Which of the three kits do you prefer?
- What do you like and dislike about each of them?
- Which items are necessary? Which are not necessary?
- Is there anything you do not understand about the kit components? If so, please explain.
- Is there anything you would add to the kits? If so, why?
- Which item is most useful? Why?

General Opinions About Delivery Kits

- What is your opinion about buying a delivery kit?
- Do you think people would buy one?
- How much would they be willing to pay for one?
- From whom would they prefer to buy it?
- How could we motivate women who might not be interested in buying a kit?
- What are the best ways to inform people about the kit?

- How would you describe the kit to other users?
- How much money do people usually spend on supplies, birthing rituals, and special gifts for the mother and baby from delivery to six weeks post partum?

Kit Packaging

- What would be a good name for the kit?
- What type of picture would you like to see on the outside of the kit?
- What color would you prefer for the kit?
- What do you do with the components after using the kit?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

2.4 FOCUS GROUP DISCUSSION TOPIC GUIDE FOR MOTHERS

SITUATION ANALYSIS

Target Audience

Mothers with at least two children who have delivered within the last two years.

Objectives

- To determine women's knowledge and experiences regarding clean delivery.
- To determine women's access to and use of clean delivery supplies.
- To gather information about women's opinions of sample delivery kits and their ideas for kit packaging.

Site

Rural___ Urban___

Introduction

Introduce yourselves and your agency. Describe the objectives of the discussion.

Conduct a warm-up session. Informally talk about children, pregnant women, agriculture, and other simple matters of interest to the mothers.

Request that they talk openly about their delivery experiences. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Ask permission to record them on a tape recorder. Explain that participants' answers will be kept confidential.

Have participants introduce themselves. At that time, take note of their names, ages, number of babies delivered, and number of children currently living.

Delivery Experiences

Encourage all the participants to share their delivery experiences. Sample questions include the following:

- How many children have you had?
- Did you deliver alone at home, at home with the assistance of someone, or at a medical site?
- If you depended on an assistant, what type of assistant—relative, friend, untrained TBA, or trained TBA?

Clean Delivery Practices

- If you or any other family member prepares for the delivery, please describe how you prepare.
- Please tell us about the techniques you use during delivery.
- If you prepare the delivery supplies for the delivery, what exactly do you do?
- What do you do to the cord?
- What do you use to cut and tie the cord?
- What do you use as a cord-cutting surface?
- What do you do to the cord, if anything, after cutting?
- What does the expression “clean delivery practices” mean to you? What clean delivery practices do you know of? Please explain.

Delivery Supplies and Equipment

- We talked about the equipment used for cord cutting. What other supplies do you use during and after delivery?
- What do you consider to be the most important supplies for delivery?
- Do you use soap? If so, when? Why or why not?

- Who decides what supplies should be purchased for delivery?
 - Who decides to buy them?
 - Who actually buys them?
 - Where are these supplies purchased?
- How difficult or easy is it to get them?
- How much is spent on these supplies?
- What do you think about putting all the essential supplies in one kit?

Feedback on Sample Delivery Kits

Present three different delivery kit samples to the participants. Show the contents of each kit, and ask mothers to say why and how each item would be used. Start a discussion about the kits:

- Which of the three kits do you prefer?
- What do you like and dislike about each of them?
- Which items are necessary/not necessary?
- Is there anything you do not understand about the kit components? If so, please explain.
- Is there anything you would add to the kits? If yes, what? Why?
- Which item is the most useful? Why?

General Opinions About Delivery Kits

- What is your opinion about buying a delivery kit? Would you buy one if it were available? If not, why?
- Do you think other women like you would buy one?
- How much would they be willing to pay for one?
- Where or from whom would they prefer to buy it?

- How could we motivate other women who might not be interested in buying a kit?
- What are the best ways to inform families about the kit?
- How would you describe the kit to your husband or mother-in-law?
- How much money do people usually spend on supplies, birthing rituals, and special gifts for the mother and baby from delivery to six weeks postpartum?

Kit Packaging

- What would be a good name for the kit?
- What type of picture would you like to see on the outside of the kit?
- What color would you prefer for the kit?
- What kind of instructions would be more useful for mothers like you?
- What should you do with the components after using the kit?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

2.5 ORDERING UNITED NATIONS KITS

UNFPA

UNFPA provides the following delivery kits for use in reproductive health services in the initial, acute phase of emergency relief situations and for reproductive health services in “normal” situations.

Clean Delivery Subkit 2

This particular kit is designed for deliveries at home and/or health institutions where there are inadequate medical facilities to perform deliveries. The clean delivery subkit 2 consists of two components (Part A for women in their sixth month of pregnancy, and Part B for use by birth attendants). The entire kit will cover a population of 10,000 for a three month period.

Part A:

Each subkit consists of the following items:

- 1 bar of soap
- 1 square meter of plastic sheet
- 1 razor blade (single-edge)
- 1 string for umbilical cord (3 x 15 cm)
- 1 cotton cloth (2 m x 1 m)
- 1 pictorial instruction sheet (clean delivery)
- sealed bag for packaging

Part B:

Two hundred of the above subkits are packaged in one container. Every container is packaged with the following additional supplies:

- 5 shoulder bags (with UNFPA logo)
- 4 boxes latex examination gloves (each box contains 100 gloves)

- 5 flash lights (with D, 1.5 volt batteries)
- 5 plastic aprons
- 5 plastic rain ponchos

To illustrate possible use, five TBAs can be given one shoulder bag with 40 clean delivery subkits, plus one each of additional supplies listed above.

The above kits can be supplied either in full or separately (Part A or Part B). The approximate cost of a kit (Part A and B) is US\$350; the approximate cost of Part A is US\$250; and the approximate cost of Part B is US\$100.

UNFPA Single Use, Disposable Delivery Kits

This small kit is based upon “three cleans” (clean hands, clean surface, and clean cord cut) and is designed to include an affordable package of essential supplies needed for clean delivery.

Each kit contains the following items:

- 1 bar of soap
- 1 stainless steel razor blade (double-edge)
- 1 string for umbilical cord (3 x 15 cm)
- 1 plastic sheet (1 m x 1 m)
- 1 instruction sheet

To Order UNFPA Delivery Kits

Additional kits are available for use by trained midwives, nurses, and doctors. To order, contact UNFPA’s procurement department at: UNFPA Procurement Services Section, 220 East 42nd Street, New York, NY 10017, U.S.A., or at www.unfpa.org.

UNICEF Clean Birth Kits

The UNICEF Clean Birth Kits are disposable kits designed for use in the home. Each kit is packed in a plastic bag with a self-sealing enclosure and contains the following:

- pictorial brochure, double-sided, one page
- 1 bar of soap
- 1 plastic sheet, approximately 0.05 mm thick, clear or opaque, 1 m x 1 m
- 2 lengths of tape for tying the umbilical cord, 0.5 m long, non-sterile, in plastic bag

- 1 pack of 5 double-edged razor blades, or 1 single-edged razor blade
- 2 wooden sticks to clean nails
- 1 small, plastic handbrush for scrubbing
- 20 pieces of sterile gauze pads, or 1 small pack

The Brochure

The brochure is placed near the top to ensure that the user does not remove anything from the bag before following the pictorial instructions in the brochure. The brochure illustrates the sequence of steps leading to a clean delivery using the supplies provided in the kit:

1. Cleaning hands—using the soap, brush, and wooden sticks for nails.
2. Preparing the delivery area and arranging supplies.
3. Tying the cord with tape.
4. Cutting the umbilical cord.
5. Disposing of the placenta and used supplies.
6. Breastfeeding the newborn.

Variety in Users and Usage

The Clean Birth Kit can be used for home births by TBAs, relatives, and pregnant women. It also can be used by professional attendants (doctors, midwives) attending home or institutional deliveries in small maternity homes, health centers, and district hospitals. The professional attendant can supplement the Clean Birth Kit with other supplies, as appropriate. The kit also may be appropriate for use in emergency situations, in refugee camps, and in areas that are unstable due to civil unrest.

UNICEF encourages countries to assemble Clean Birth Kits locally and will support such activities, provided that quality assurance measures are implemented. Interested countries should use the Clean Birth Kit as a standard and adapt the pictorial brochure to reflect local clothing, customs, and birthing procedures.

UNICEF continues to supply the three standard delivery kits (Traditional Birth Attendant Kit, Auxiliary Midwife Kit, and the Professional Midwife Kit) through the UNICEF Supply Division in Copenhagen, Denmark. However, new, pre-assembled kits are being developed and will replace these standard delivery kits in the near future.

To Order UNICEF Clean Birth Kits

UNICEF country offices in each country should be contacted to determine availability of the UNICEF Clean Birth Kit. For additional information on other delivery kits, contact the UNICEF Supply Division, UNICEF PLADS, Freeport, DK 2100 Copenhagen, DENMARK, or at www.unicef.org.

3 PLANNING A BASIC DELIVERY KIT PROJECT



Program for Appropriate Technology in Health

www.path.org

SECTION 3

PLANNING A BASIC DELIVERY KIT PROJECT

SUMMARY

Section 3 presents the key steps to planning a basic delivery kit project, including:

- setting goals and objectives;
- research phases such as the comprehensive needs assessment, field trial, manufacturer's survey, and market test; and
- determining kit contents and packaging.

The section reviews the difference between essential and nonessential kit components. It also emphasizes the importance of limiting kit contents to minimize costs, ensure affordability, and maintain sustainability.

3.1 INTEGRATING THE BASIC DELIVERY KIT PROJECT INTO THE MCH STRATEGY

To be successful, basic delivery kit projects must be carefully integrated into the existing health care infrastructure. Program managers who attempt to develop basic delivery kit projects as independent projects will find it difficult to achieve sustainability.

When designing the kit project, managers should explore how a clean delivery program and a basic delivery kit project can complement ongoing maternal and child health (MCH) activities. Kit activities can be integrated into safe motherhood and child survival activities such as the following:

- training programs for traditional birth attendants (TBAs) or medical providers;
- tetanus toxoid (TT) immunization campaigns;
- antenatal care clinics;
- development of home-based, record-keeping systems;
- promotion of breastfeeding, neonatal nutrition, or clean delivery practices; and
- social marketing of child-survival interventions, including oral rehydration salts.

An integrated strategy will:

- avoid duplicating existing MCH efforts conducted by ministries of health (MOHs) and nongovernmental organizations (NGOs);
- allow for partial program subsidies;
- strengthen existing MCH efforts (such as safe motherhood and child survival programs) as well as the clean delivery program; and
- involve potential basic delivery kit users who may not otherwise learn about clean delivery practices.

The comprehensive needs assessment described in Section 3.3 will help program managers ensure integration by determining what health activities are being conducted in the area, and what resources can be shared.

3.2 SETTING MEASURABLE PROJECT GOALS AND OBJECTIVES

When implementing a basic delivery kit project, kit project managers must establish overall goals that are supported by specific, measurable objectives.

Overall Goals

A project's overall goals may include:

- (in combination with MCH program activities), contributing to the decrease in maternal and neonatal mortality and morbidity caused by puerperal sepsis, cord infection, and tetanus;
- improving clean delivery practices of delivering women and trained and untrained birth attendants; and
- establishing a sustainable basic delivery kit project as one component of a clean delivery program.

3



Delivery kit planning session with health managers in Africa.

Specific Objectives

Measurable objectives also must be developed. These objectives may be based on:

- annual number of kits produced;
- number of assembly sites established;
- number of assemblers hired and trained;
- number of promotional channels, and number of potential users reached per year;
- number of distribution channels;
- number of kits distributed, types of users receiving the kit, and areas reached;
- number of kit outlets (such as retail stores, voluntary women's groups, NGOs, and health posts); and
- number of TBAs, midwives, and community health workers who use the kit during all deliveries by an established date.

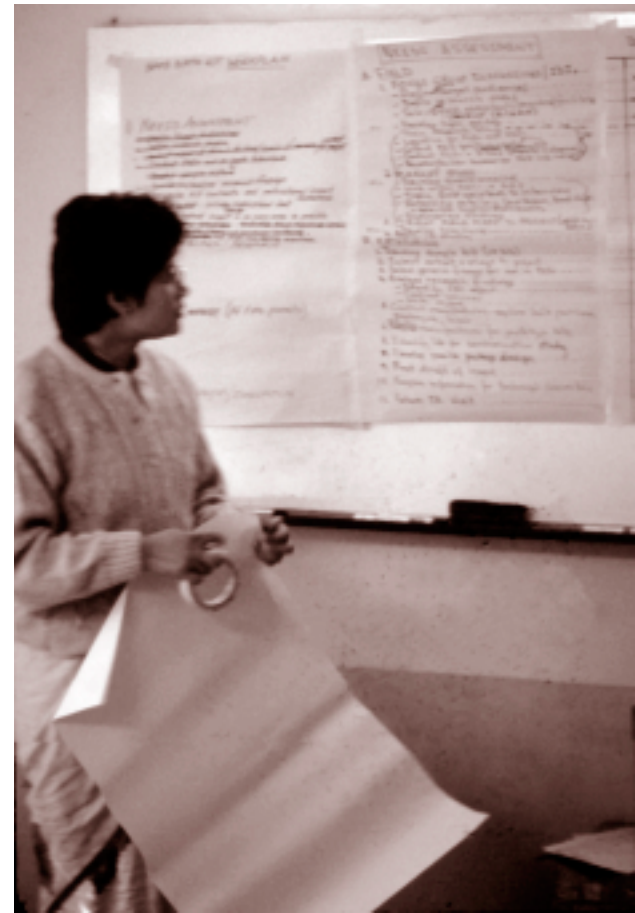
Project Plan and Timeline

The project plan should carefully outline major activities that will be involved in developing the basic delivery kit project, including the comprehensive needs assessment, kit design/development, procurement of raw materials for assembly, the field trial, assembly and storage activities, distribution, promotion and sales, and ongoing monitoring and evaluation.

Work Tool 3.1 provides a sample work plan and timeline that can be used to guide project planning.

Fully Subsidized, Partially Subsidized, or Commercial Kits

Developing the project plan requires that the MCH manager decide whether the kit will be fully subsidized, partially subsidized, or a commercial venture. This decision will impact the level of activity in the various planning steps. Funding sources for subsidized kits will need to be identified, and in the case of commercial kits, a competent agency that can take on long-term kit promotion and cost-recovery will need to be identified.



Developing work plans is essential for each phase of delivery kit development.

3.3 RESEARCH PHASES

There are three key research phases required for development of a delivery kit project: comprehensive needs assessment, field trial, and test market. These formative research phases will shape the design of the basic delivery kit project. The type of kit will also determine the research phases. The partially subsidized and commercial kits require a market test, but the subsidized kit does not.

Phase 1: Comprehensive Needs Assessment

Delivery kit project managers should review the information gathered earlier during the situation analysis and feasibility study (see Section 2) and determine what additional qualitative data is necessary to develop the basic delivery kit project. Whereas, the situation analysis allowed the program manager to decide whether a

delivery kit project would be appropriate, the additional qualitative research in the Phase 1 comprehensive needs assessment should be conducted with a broader range of audiences—from kit users, to distributors, to small retailers and manufacturers.



Men, such as these men in Pakistan, should be involved in the delivery kit needs assessment.

Target Audiences

Kit project managers should identify the target audiences for the comprehensive needs assessment, which may include:

- women who have experienced at least two deliveries;
- untrained and trained TBAs and midwives;
- health care personnel in the MOH or NGOs;
- men, as purchasers of household supplies;
- influencers, such as mothers-in-law;
- manufacturers of kit contents; and
- distributors, wholesalers, and retailers.

Separate focus groups should be conducted with members of each audience segment. For example, discussions with women from the community should be carried out separately from discussions with TBAs or health workers. As key informants about traditional local birth practices, TBAs should be a particularly important focus of the needs assessment.

In order to increase their comfort levels, facilitate information sharing, and take different birth practices into account, diverse groups such as tribal populations should be assessed separately. It is important to design special approaches that accommodate their needs and practices, if any unique obstacles are identified. For example, if several neighboring tribal groups have different birth-related practices but live in close proximity to one another, kit program activities should be tailored to the practices of each group.

In sum, the comprehensive needs assessment will include additional qualitative research with women, TBAs, and men, market research with purchasers and retailers, interviews with distributors, and a survey of manufacturers of kit components.

Qualitative Research on Knowledge, Attitudes, and Traditional Birth Practices

Kit project managers should use the focus group discussions and/or in-depth interviews to gather information on common issues related to delivery, including the role of TBAs and traditional practices during pregnancy and delivery.

Discussions about the **role of TBAs** should include:

- types of TBAs and their roles during pregnancy, labor, and delivery;
- community perceptions of TBAs;
- detailed profile and practices of TBAs;
- equipment currently used by TBAs;
- TBA's willingness to accept, use, and promote basic delivery kits; and
- links between the community, TBAs, and maternity facility personnel.



Untrained TBAs can be major purchasers of the kit.

Discussions of **traditional practices during pregnancy and delivery** should include:

- mothers' attitudes toward and acceptance of TT immunization;
- preferred delivery sites and preferred providers of birth assistance;
- motivation to contact a provider during pregnancy;
- beliefs regarding advance preparation for the infant's arrival;
- use of soap and/or water to clean hands and perineum;
- practices related to care of the umbilical cord (cord tie, cord cut, and care of stump);
- various users' roles and attitudes toward using a basic delivery kit; and
- items used during delivery.

The key role of women's groups, including voluntary women's organizations and other community-based groups who provide supplies or assist in deliveries, also should be evaluated.

Work Tool 3.2 provides a sample topic guide for focus groups with women who have children.



Retailers, such as this one in Guatemala, are an important source of information during the market test.

Market Research

Project managers of partially subsidized or commercial kits that will be sold in retail outlets must conduct market research. Market research can be used to validate or revise the findings from the needs assessment. Market research usually requires about two months, although timelines may vary depending on market size.

Qualitative research methods such as focus group discussions and in-depth interviews can again be used to explore a range of issues with different audiences. These methods can be used to obtain information about the local market that will be essential to program planning, including:

- comparable costs of basic commodities such as candles, razor blades, and kerosene;
- the wholesale and retail market for basic delivery kits;
- images and key messages that can be used to promote the kits;
- the net profit acceptable to wholesalers and retailers;
- distributors' commissions; and
- effective promotion and distribution channels.

Potential buyers of household and/or delivery supplies can be interviewed to determine their motivation for buying the kit and how much they are willing to pay for it. Potential buyers may include pregnant women, TBAs, husbands of pregnant women, mothers-in-law, men married to women of reproductive age, relatives, or neighbors. Interview questions may include:

- Who normally purchases supplies for the household?
- When do they purchase delivery supplies?
- How much is spent on delivery supplies?
- How much is spent on items related to a newborn?
- How much would purchaser spend on a basic delivery kit?

Kit project managers also can conduct consumer surveys about household purchasing practices to solicit input on price, brand names, kit contents, packaging, and promotional materials. The surveys can easily be conducted in the marketplace.

Kit project managers should use this information to design a marketing plan that will promote the kits appropriately and ensure access to consumers.

Work Tool 3.3 provides an interview topic guide for household purchasers.

Wholesalers and retailers can be interviewed to determine their willingness to stock and sell the kit, their expectation of profit margin, how much their customers would be willing to pay, and types of promotional materials that would help them increase product awareness and customer motivation to buy the kit. Interview questions may include:

- What would motivate them to sell the delivery kit?
- What types of supplies do they normally sell? Whom do they sell them to?
- Who normally purchases birth-related or hygiene-related items from their shop?
- What type of delivery kit package would be most appropriate to store on their shelves?
- What are their expectations regarding profit margin on the delivery kit?
- What would be a reasonable price for the delivery kit?
- Whom do they recommend as a distributor?
- What types of promotional materials would help them sell the kit?
- What should be the key messages in the promotional materials?

Photo: JHU/CCP



Motivated retailers can increase women's access to delivery kits.

Work Tool 3.4 provides a sample questionnaire for merchants.

Distributors of basic delivery kits can be interviewed to determine their product priorities, geographical areas, and expectations regarding commissions. Interview questions may include:

- Which local distributors would be interested in distributing the delivery kits?
- What would motivate them to distribute the kit?
- How much commission would they expect for selling kits?

- What geographical areas and how many wholesalers and retailers do specific distributors cover?

Work Tool 3.5 provides a sample questionnaire for health program staff, NGO staff, and community health workers, and Work Tool 3.6 provides a sample questionnaire for medical stores and pharmacies.

EXAMPLE FROM THE FIELD: INDIA

3

In South India, the Rural Women's Social Education Centre (RUWSEC), a grassroots women's organization, initiated a field study on the feasibility of developing simple delivery kits through local women's groups. They sought to identify effective strategies to ensure the use of the kits by women, and determine the health impact of kit use. The study was conducted in 1990-1991 and included interviews with 284 pregnant women in four cluster areas.

While local production of delivery kits has its advantages, the RUWSEC discovered that it also is important to standardize essential kit components and production to ensure consistency and quality. RUWSEC found that kit development functioned best when managed by local women's groups in villages where quality assurance standards were

observed. The researchers concluded that creating a natural network of women's groups around the issue of clean deliveries may further stimulate people to seek creative solutions to improve delivery practices, such as local development and distribution of kits or consciousness-raising about clean delivery practices.

RUWSEC also observed a number of unexpected results of kit introduction, such as an increase in the proportion of hospital deliveries and a heightened awareness of the need for special care during pregnancy and delivery.¹



Manufacturers' Survey

Kit project managers should survey various manufacturers to obtain information about cost and availability of items that are included in the basic delivery kit. The survey can be used to:

- assess the various sources of materials;
- compare the cost and quality of materials from different manufacturers;
- determine the cost-benefit of purchasing materials in large quantities; and
- determine if manufacturers can supply materials on a regular basis.

Before surveying manufacturers, kit project managers should have an estimate of the number of kits that will be needed each year. This estimate will help determine the level of purchase of goods, which is key to calculating bulk purchases and possible price breaks with a manufacturer. (See Section 4.2, Step 2, for information on determining the number of kits to assemble.)

Kit project managers should solicit information about razor blades, soap, cord ties, plastic sheets, packaging, and printing. Additional issues that might affect pricing and production also should be explored. For example:

- If there is more than one manufacturer of a kit item in the area, encourage competition, and request price breaks.
- Explain the program to the manufacturer to determine if they would be willing to subsidize the materials (i.e., reduce their profit margin) in view of the social contributions the kit will provide.
- Often, a manufacturer produces cheap and expensive versions of their product. It is important to state that minimizing cost is a priority and that the cheaper versions are most appropriate.
- Beyond the actual cost of bulk quantities, determine the shipping cost, taxes, and any other “hidden” costs that might be associated with purchase of the item.

Work Tool 3.7 provides a sample interview form that can be used to conduct a survey of manufacturers. Section 4, Table 3, provides an example of combined kit assembly costs.

Priority Areas/Target Areas

To ensure the feasibility of the project, it is important to introduce the basic delivery kit in limited geographical areas of high need. In national delivery kit projects, the needs assessment will provide information that helps identify target areas. Smaller projects (such as mission hospitals) may have already determined target areas through their program activities.

When determining which areas should be targeted, kit project managers should focus on areas where:

- home delivery is very common;
- untrained TBAs, relatives, or neighbors routinely attend births;
- women routinely deliver alone;
- there is a high incidence of neonatal tetanus and umbilical sepsis;
- puerperal sepsis and maternal tetanus are common causes of maternal death;
- there are high maternal and neonatal mortality rates;
- there is poor reporting of births and neonatal deaths;
- newborns delivered at maternity facilities have high rates of tetanus and cord infection; and
- there are poor standards of hygiene.

Phase 2: Field Trial

The information obtained from the Phase 1 needs assessment can then be used to develop a prototype of the basic delivery kit. This prototype, which will be assembled to the project's assembly guidelines, can then be used for the field trial. (For more information about kit assembly, please see Section 4.)

During the field trial, the prototype delivery kits are given to a significant number of women during their seventh, eighth, or ninth month of pregnancy. For a national level project, as many as 200 to 700 prototypes may be dispensed. For smaller projects, 10 to 25 prototypes may be sufficient. After the delivery, postnatal interviews should be conducted to determine:

- women's perceptions of the usefulness of kit contents;
- actual use of the kit;
- how to improve the kit;
- community acceptance;
- comprehension of pictorial instructions; and
- whether and how the kit should be promoted.

The field trial data, which must be compiled and analyzed, will be used during the test market phase. As shown in "Example from the Field: Bangladesh" it will be necessary to modify the kit, if the field trial reveals problems with kit contents or design.

Field trials require appropriate staffing resources and advance planning. Kit project managers should develop a field trial strategy, guidelines, and data-collection tools, and determine field trial sites. Once trial supervisors are identified, they should train field assistants in effective interview techniques and orient them to their

responsibilities. Supervisors also must ensure that the trial is conducted in accordance with standardized guidelines.

For additional information, please see the Work Tools at the end of this section. Work Tool 3.8 provides an example of a field trial orientation for NGO staff; Work Tool 3.9 outlines the responsibilities of field trial workers and field supervisors; Work Tool 3.10 presents a sample field trial worker training curriculum; Work Tool 3.11 provides a registration form for pregnant women; and Work Tool 3.12 provides a sample postnatal interview questionnaire.

Phase 3: Test Market

After the field trial has been conducted, the test market is initiated. Both partially subsidized and commercial kits should be evaluated in a test market. In this phase, kit project managers distribute prototype kits to multiple sales outlets during a four- to six-month time period. During that period, data are obtained as the kits are promoted and sold.

At the end of the test market, sellers and community members should be interviewed about their perceptions of the kit and any accompanying promotional materials that are ready to be tested (see Section 5 on kit promotion). The number of kits sold in combination with feedback from retailers regarding promotion approaches and customer satisfaction is a reflection of the kit's commercial viability and distribution.

The objectives of the test market are to:

- analyze and/or validate kit price,
- determine the commercial demand for the kit,
- analyze effectiveness of kit packaging and promotional materials,
- analyze and test distribution channels, and
- validate/determine appropriate retail outlets.

The test market should be conducted in a geographical area that has at least two sites (each with multiple outlets), high fertility rates, a dense population, easy access



During the test market, retailers are provided with prototype kits and promotional items.

RACHA and UNICEF Conduct Test Market in Cambodia

To conduct a test market of a basic home birth kit in Cambodia, the Reproductive and Child Health Alliance (RACHA) and the United Nations Children's Fund (UNICEF) selected four test sites, interviewed mothers and birth attendants, and tested a variety of marketing and distribution methods. The test market demonstrated that the kit provides essential materials in a convenient package that women use correctly. Sales were high even without marketing and advertising, and 100 percent of the women interviewed stated that they would both use the kit again for future deliveries and recommend the kit to others.²

for researchers' travel and follow-up, and good health infrastructure (such as antenatal care health posts).

Before initiating the test market, staff must complete two important activities: (1) prototype kit assembly, and (2) development and pretesting of promotional materials and activities.

Prototype Kit Assembly

In order to avoid over-production or insufficient supplies, prototype kit assembly activities must be carefully planned. To determine whether it is feasible for women's groups to assemble the kits as a long-term, income-generating activity, the kit project managers should select a women's group in one of the test market sites and train them in assembly and quality control. Depending on the results of the test market assembly activities, recommendations can be made for central, regional, or district-level production. (For information on selecting kit contents, please see Section 3.4. For information on assembling kits, see Section 4.)

Kit Promotion

The promotional activities for the test market are critical to its success. Promotional activities will increase users' and purchasers' awareness of and motivation to buy the kit, while at the same time assuring the distributors and retailers that there will be demand for the kit.

Promotional items must be carefully developed and pretested using information and messages that result from the needs assessment. MCH promotion methods and key messages regarding clean delivery should be taken into account when developing kit promotional activities to ensure program integration.

EXAMPLE FROM THE FIELD: BANGLADESH

In 1988, the Christian Commission for Development in Bangladesh (CCDB) developed a commercial basic delivery kit in collaboration with the Ministry of Health and Program for Appropriate Technology in Health (PATH). The project was supported by funds from UNICEF and The Ford Foundation.

Project implementers began with an initial field assessment, then moved to production and distribution, and lastly, evaluated the process. CCDB chose to implement a formative evaluation, focusing on kit development and marketing. Kit development was divided into three phases: needs assessment, field testing, and test marketing.

Needs Assessment

During the needs assessment, trained female interviewers conducted focus group discussions and interviews among women of reproductive age and TBAs; male interviewers held discussions with groups of men. The purpose of the focus groups was to learn about traditional birth practices and to elicit suggestions for the design and content of the kit, instructional insert, logo, cost, and promotional strategies.

Field Testing

Based on results of the needs assessment, CCDB developed a prototype kit and field

tested it for acceptability.

Female field workers identified pregnant women in selected areas and distributed the basic delivery kits to them in their eighth month of pregnancy. They interviewed the women within a month after the birth. Women were asked if they had used the kit, if they had difficulty using or understanding any items, how they used each item, how they felt about the kit design, and whether they would buy a kit in the future. Based on the field testing, changes were made in the design of the pictorial instructions.

Test Marketing

The kits were test marketed in five areas of Bangladesh. They were sold through a total of 100 small retail outlets, pharmacies, and women's committees. Field monitors used tally sheets to record information about sales, who purchased the kits, and which field sites sold the most kits. These data showed that women's groups were by far the favorite place of purchase; small shops also were popular. The majority of purchasers were health staff of nongovernmental organizations (NGOs), men, pregnant women, and TBAs. Most purchasers heard

(continued on next page)



about the kit through various promotional efforts, particularly village meetings and rickshaw broadcasts. Both purchasers and retailers were asked about the promotional materials, cost, and packet design.

Formative Evaluation Tools

Formative evaluation tools used in the Bangladesh program included the following:

- focus groups and in-depth interview guides for interviewing women of reproductive age, TBAs, and husbands;
- interview guides for retailers;
- topic guide for pretesting the pictorial instructions in the kit;
- topic guide for pretesting the package design, name, and logo;
- production guidelines and quality assurance procedures for the kit assemblers;
- training outline for kit assemblers;
- postnatal follow-up questionnaire; and
- assessment guidelines for promotional materials.^{3, 4}



Photo: CCDB

Clean delivery kit developed by CCDB in Bangladesh.

Promoting Use Through Positive Images and Slogans

Some basic delivery kits use colorful logos that include a traditional symbol of healthy newborns and colors that convey fertility, happiness, or good luck. The use of these logos and colors can reinforce positive messages and slogans that motivate people to buy and use the kits. In turn, the higher kit sales motivate wholesalers, retailers, community groups, and NGOs to stock and distribute the kits. The choice of logos, colors, and key messages should be carefully pretested with the target audiences.

For more information on promotional activities, please see Section 5.

Table 1. Promotional Activities for Marketing of Basic Delivery Kit

Promotional Activities/Materials	Target Audiences
Information sessions/orientations for health post and clinic staff, TBAs, village leaders, women's groups, community health workers	Health workers, individuals who influence health care decisions
Display box in shops	Shop customers
Danglers	Shop customers
Flyers	General public
Posters	General public
Flash cards	Health post workers, TBAs
Radio (soap operas, interviews, advertisements)	General public
Wall paintings	General public

Distribution

If possible, kit project managers should find a distributor who is willing to distribute the kits to all test market sites or at least the urban and semi-urban areas. Rural areas may need to be serviced by field assistants, if distributors are not available. Potential target outlets include:

- in urban areas: pharmacies;
- in semi-urban areas: pharmacies and grocery shops; and
- in rural areas: teashops, grocery shops, pharmacies, and medical shops.

Maintaining Distribution

Within each test market site, kit project managers should choose one staff person to work as a “test market field assistant” or recruit “market monitors” and orient them to the following responsibilities:

- selecting retail outlets and visiting retailers weekly,
- interviewing retailers and filling out reports,
- replenishing kits as needed,
- collecting money for kits sold (less commissions),
- distributing and posting promotional materials,
- providing feedback on promotional materials (either from questioning retailers or “person-on-the-street” interviews), and
- coordinating with district health officer and delivery kit project team.

Nepali Retailers Interviewed at Haat Bazaars

In Nepal, researchers went to the haat bazaars (local markets that occur at the end of each week) to conduct interviews with men who bought household goods there. Men were asked if they would purchase a delivery kit, and if so, what they would be willing to pay for it. Additionally, the researchers interviewed local retailers, surveying them about how they would like to see the kit promoted. The information that was obtained through the interviews helped kit developers determine the kit price and how to promote the kit using approaches that appeal to both clients and retailers, such as posters, wall paintings, and shop dangles.

All vendors at the various test market outlets should be carefully interviewed during and at the end of the test market to collect their feedback.

Work Tool 3.13 provides a sample field assistant training curriculum.

Follow-up and Monitoring

The local manager of the test market project should instruct field assistants to use a weekly record form and report back to them on a monthly basis regarding the number, type, and location of retail outlets, number of kits sold, money and feedback collected, and resupply needs. The test market manager will then report to the delivery kit project team, who should visit the test market site once a month. Work Tool 3.14 provides a sample weekly record form.⁵

If needed, kit project managers can increase or decrease the number of kits depending on actual sales. After the first month, the promotional activities and number of kits should be assessed through interviews with women, men, shopkeepers, and TBAs. The resulting data can be used to finalize kit packaging and determine price,

distribution, and promotional activities. Through these activities, the test market will serve as an important process evaluation. Ultimately, the most important indicator is the number of kits purchased.

Work Tool 3.15 provides sample test market data tables; Work Tool 3.16 provides a sample field assistant retail outlet form; and Work Tool 3.17 provides focus group discussion topic guides for assessing promotional materials.

3.4 DETERMINING KIT CONTENTS AND PACKAGING

Kit Contents Vary

Locally produced kits vary in content depending on:

- the community's needs, which will have been identified through the needs assessment, field trial, and market research;
- whether the kits are fully subsidized, partially subsidized, or solely commercial;
- the expertise, policies, and priorities of the health care personnel who develop them; and
- the technical skills of the kit users (women delivering at home alone or trained or untrained TBAs).

Match Box Kit From Kenya

In some programs, only locally available items are put in kits. For example, the match box kit from Kenya contains only three items: a piece of soap, a razor blade, and cord ties.⁶

3

What Are Essential Basic Delivery Kit Components?

Opinions vary regarding which items are essential to include in basic delivery kits. The most important items are those that ensure the six principles of cleanliness identified by World Health Organization (WHO) (Figure 2).

Figure 2. WHO's Six Principles of Cleanliness and Relevant Kit Components

Cleanliness Principle		Relevant Kit Components
Clean hands	⇒	Soap
Clean perineum	⇒	Soap
Nothing unclean to be introduced into the vagina	⇒	Soap
Clean delivery surface	⇒	Plastic sheet
Clean cord-cutting tool	⇒	Clean, unused razor blade
Clean cord care	⇒	Clean cord ties Clean cutting surface ⁷

Begin With a Simple Kit

A guiding principle for deciding the contents of a kit is to begin with a simple kit. Careful consideration should be given to the number and complexity of the kit

components. As the program progresses, the kit can be modified to include additional items, if appropriate. No single kit will meet every user's needs; kits may need revision as they are introduced into MCH programs. As different users are identified, a range of kits may be designed. Compromises may have to be made depending on the practicality and cost of various items, recommendations by health officials, and the needs and perceptions of the kit users.

A thorough needs assessment and ongoing monitoring and evaluation will ensure that kits are appropriate for the needs and the resources of the target users.



Each kit component is essential to clean delivery.

Five Essential Items

Based on guidelines agreed upon at the June 2000 United Nations Population Fund (UNFPA) Technical Advisory Group on Clean Delivery Practices, single-use, disposable, basic delivery kits for the home should contain five essential items:

- **Razor blade.** The razor blade is the most important item in the kit. It is essential for clean cutting of the cord. In most kits, the razor blade is double-sided. While one-sided blades might be preferable, they are more expensive and add to the cost of the kit. Razor blades should be carefully wrapped in paper and/or plastic to protect them from moisture or from causing injury.
- **Soap.** Soap enhances clean practices by motivating hand washing. When determining what type of soap to include in the kit, carefully price the various options. Pre-wrapped, individual bars of soap are not necessary for maintaining cleanliness, and they may add to the kit cost. To reduce kit cost, kit project managers should consider buying large bars of unwrapped soap that can be sliced and packaged at the factory or by the kit assemblers.

- **Plastic sheet.** The plastic sheet protects the mother's perineum and newborn infant's cord from dirt and helps maintain a clean delivery area. Plastic sheeting is easy to buy in large quantities.
- **Cord ties.** Clean cord ties are essential for clean cord care. The number of cord ties included in a kit may vary. Some include two cord ties, while others include three, in case one falls on the ground. The cord ties can be made of string or thread, depending on cost and local availability/preference.
- **Pictorial instructional insert.** The pictorial instructional insert helps the user understand the role of each item in the kit, how to use items correctly, and the order in which they should be used. These instructions are essential to correct delivery kit use. They reinforce key messages about clean delivery practices and good neonatal care. The pictorial instructions must be carefully designed to reflect numerous considerations, including:
 - the literacy level of the users;
 - the appearance of the women in the instructions, which should be culturally similar to the appearance of the kit users;
 - clear messages on correct use of each kit item;
 - the importance of hand washing—with soap—during the delivery;
 - the importance of cutting the cord with the razor blade;
 - additional neonatal health messages such as immediate wrapping of the infant and breastfeeding;
 - appropriateness and acceptability of the instructions; and
 - disposal of kit contents after use.

Once designed, the draft of the pictorial insert must be carefully pretested with potential kit users to ensure that

Unsafe Cord Ties

Sometimes blades of grass, bark fibers, reeds, or fine roots are used to tie the newborn's umbilical cord. These materials can be harmful, because they often harbor tetanus spores from the soil and, thus, increase the risk of neonatal tetanus.⁸

3



The pictorial insert is essential to correct kit use.

the insert is appropriate, comprehensible, and acceptable. An example of pretest questions for evaluating the pictorial insert is included as Work Tool 3.18.

Considering Additional Kit Contents

Beyond the essential items, kit contents can vary widely depending on the financial and staffing resources of the agency producing the basic delivery kit. Choice of kit contents also depends on the logistical and procurement systems for medical supplies and the types of supplies available through the existing health care infrastructure. To determine the necessity of each of the kit components, kit project managers should consider the following questions:

- Is there a solid rationale supported by WHO for every item in the kit?
- Are the design of the kit and the choice of contents based on thorough, qualitative research of consumer preferences?
- Will users understand how to use each kit item correctly?
- Will users actually use each item?
- What are the existing birth practices, and how does each item supplied in the kit relate to these?
- Will the cost of the contents prevent the kit from being accessible to users?
- Will each item help resolve common health problems such as tetanus or cord infection?

Nonessential Kit Components

Unfortunately, to enhance the role of the delivery kit, many well-intentioned health providers and MCH managers include items in basic delivery kits that are not essential to clean delivery and cord care. These items increase the kit cost and often are used incorrectly or not at all. Nonessential kit items may include gauze squares, topical anti-microbial ointment for the cord, fingernail-cleaning sticks, latex gloves, water bowls, sterile razor blades, pans for boiling water, flashlights, suturing supplies, vitamin A capsules, folic iron tablets, dispensers for tetracycline eye ointment, or swaddling cloths.

While some of these items may prove useful, they can increase kit costs substantially. Kit project managers must carefully determine the financial feasibility and sustainability of including nonessential items. Before adding nonessential items to the kit, the MCH manager must first:

- assess the real health need for these items in the community;
- determine if there are other health projects that provide these items;

- determine the additional cost of including nonessential items in the kit (including such factors as procurement cost, added distribution costs of a larger delivery kit, staff time and resources involved, and the lower profit margin necessary to maintain affordability of the kit); and
- determine how the additional cost will be supported by the agency budget.

To determine what is nonessential, the kit project manager should focus on the primary purpose of the basic delivery kit: clean cord care.

UNFPA Recommendations on Nonessential Items

In 2000, the UNFPA Technical Advisory Group on Clean Delivery Practices made the following recommendations regarding nonessential items of basic delivery kits intended for home deliveries:

- **Sterile razor blades.** Delivery kit experts generally agree that **sterilizing the razor blade is not essential**. WHO states that a clean razor blade is sufficient to prevent cord infection. They reason that:
 - these items will not remain sterile when transported and stored in storehouses or retail shop shelves;
 - sterilizing with gamma rays or autoclaving adds unnecessarily to the kit cost; and
 - prevention of tetanus, sepsis, and puerperal infection does not require sterile items.
- **Topical anti-microbial ointments.** Kits should not include topical anti-microbials because there is not enough evidence to recommend their widespread use on the cord stump,⁸ as evidence regarding prevention of cord infection is inconclusive. Anti-microbials also increase kit cost and may be harmful if used incorrectly.
- **Latex gloves.** The fear of blood-borne infections, especially HIV, has understandably prompted many agencies to include latex gloves in home delivery kits.

Incorrect Use of Nonessential Kit Items

One example of a nonessential item used incorrectly was the inclusion of tetracycline ointment in kits in Somalia. The tetracycline ointment tube allowed multiple applications by several family members, occasionally resulting in the spread of infection between family members.⁹ Another example involves a kit program in Cambodia. Iron and vitamin A tablets were included in home birth kits, but it was later found that women did not understand how they were to be used.

Inconsistent Use of Latex Gloves

In an observational study on obstetric practices in Ghana in 1991, the investigators found that few midwives or nurses followed the rules for clean delivery, despite formal training and considerable knowledge about how infection is spread. In addition, even though latex gloves were available, they rarely were used. “It was not uncommon for the midwives to wear a glove on only one hand during vaginal delivery; the other glove was reserved for a later delivery.” When gloves were available, they were often contaminated or reused.¹⁰

Gauze Misuse

During a field visit in 1995 to work on prototype kits in Nepal, PATH staff found that trained attendants used gauze to wipe the babies’ eyes, but that untrained attendants were using it to wipe off feces and/or put it on the umbilical cord as a dressing.¹¹

When including gloves, it is important to first determine who the primary user of the basic delivery kit will be. If the primary users are trained TBAs who know how to use gloves, and if they will be trained to use the gloves correctly, including gloves is clearly appropriate. However, if the primary kit users are delivering women or untrained TBAs unfamiliar with glove-use, it is unlikely that the gloves will be used correctly or at all.⁹ If used incorrectly, gloves can cause cross infection.

- **Gauze.** If placed on the umbilical cord, gauze can cause, rather than protect against, infection.
- **Drugs** (such as vitamin A capsules, iron folate tablets, or tetracycline ointment). Drugs can increase kit cost and decrease access to the kit. In addition, kit users may not use the drugs appropriately.

Kit Packaging

When designed properly, kit packaging will fulfill several roles, including protecting the quality of the kit contents, ensuring cultural appropriateness, and maintaining the cost-effectiveness of the kit. In addition, appealing packaging can motivate wholesalers and retailers to stock and sell the kit when it promotes use through attractive and positive images, messages, or slogans.

The type of packaging should be tailored to how the kit will be marketed as well as the range of distribution within the community. For example, subsidized kits not intended for commercial use may be packaged more simply and cost-effectively than commercial kits, as they may need only to be packaged in a plastic bag with a simple label designating the name and purpose of the kit.

Protecting the Quality of the Contents

The primary role of kit packaging is to maintain the cleanliness of the kit contents. The contents should be individually wrapped in paper or plastic, and then placed together in a small, sealed, plastic bag. This protects the contents from moisture, dust, and rodents. Razor blades are especially vulnerable to moisture and may rust. While most delivery kit packaging consists of a plastic bag that contains all of the kit contents, some kit producers also insert the plastic bag into a thick paper box. The box serves as a second layer of protection and makes them easier to store and display in retail outlets.

Using Cost-effective Packaging

Kit designers should use cost-effective packaging that will not significantly increase the overall cost of the kit. The cost of printing labels and/or paper boxes can be substantial and must be considered as part of the total packaging costs.

Motivating Wholesalers and Retailers to Stock and Sell the Kit

Commercial kits require packaging that appeals more strongly to wholesalers, retailers, and potential users. If the kits are small and durable, wholesalers will be more inclined to stock them in large quantities, and retailers will be more likely to devote shelf space to the product. Small size and durable packaging also enable NGOs and community groups to store, distribute, and sell the kits more easily.

3.5 IDENTIFYING A RETAIL PRICE

The final design of kit contents and packaging is a combination of what potential buyers want in a kit, what public health officials see as appropriate, and what is feasible, given cost constraints.¹² The retail price of the basic delivery kit should be based on the affordability data obtained through the field test, program subsidies, and program costs. For a discussion of program costs and budgets, please see Section 4.2, Step 4.

Pricing for a long-term strategy (for a large project) should be based on production of at least 10,000 kits, fewer for a smaller project. An estimate of 30 percent can be used for overhead, distribution, and promotion costs. Commission can be calculated

In Banjura, Nepal, Men's Concern About Kit Cost

"It is not necessary to spend even 15 rupees when there's a haiya (sickle) already here in the house. It costs nothing and was always used before."¹⁴

3

Determining Price

An important part of marketing commercial or partially subsidized basic delivery kits is pricing. Pricing may vary according to local users' willingness and ability to pay for the product. For example, in Nepal, market research indicated that, although a small amount of money is spent on items for the delivery itself, families do spend significant amounts on birth items such as special foods, gifts, and oils needed for a purification ceremony. The data showed that families are able to pay cash for birth-related purchases (up to 2,000 Nepalese Rupees), and that a retail price of 15 Rupees (US\$0.20) would make the kit affordable to most families.¹¹

at 25 percent. The test market preparation will confirm these figures or show how they should be adjusted.

The per-unit costs for a basic delivery kit may resemble the following examples.

<u>Item</u>	<u>Cost</u>
Soap	0.50
Razor blade	1.50
Plastic sheet	2.00
Small plastic package	0.05
Large plastic package	0.10
String	0.07
Pictorial insert	0.75
Box	1.00
Labor	0.50
Subtotal	6.47
Overhead expense (30%)	1.94
Subtotal	8.41
Commission (25%)	2.10
Total Price	10.51

The recommended kit price for test market is between 11.50 and 13.00 units of currency.¹³

The recommended retail price of the kit should be affixed to the kit with a sticker at the assembly site prior to distribution. Priced kits increase buyer confidence by placing a value on the kit and assuring them that they are not being charged too much. Prices must be controlled in order to optimize the profit margin for the kit producers, wholesalers, and retailers while keeping the kit within the affordable range of poor families.

Work Tool 3.19 provides a sample delivery kit cost breakdown from Nepal.¹⁵

PLANNING A BASIC DELIVERY KIT PROJECT

Work Tools

3

Adapt as needed for local circumstances.

3.1 SAMPLE WORK PLAN AND TIMELINE FOR BASIC DELIVERY KIT PROJECT

Activities		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		Months																	
Situation Analysis																			
Survey key documents	X	X																	
Conduct limited focus-group discussions with target audiences (women and TBAs)	X	X																	
Conduct limited in-depth interviews with NGO and MOH staff	X	X																	
Determine availability of local kits and UN kits	X																		
Assessing Feasibility																			
Assess program resources	X																		
Assess local collaborators	X	X																	
Assess availability of raw materials	X																		
Deciding to Develop a Basic Delivery Kit Program																			
Make final decision				X															
Establish a technical advisory committee, if useful				X															
Assign program responsibilities to specific staff				X															
Recruit staff (and consultants), if needed				X															
Needs Assessment																			
Supplement data from situation analysis					X														
Conduct qualitative research on delivery practices					X	X													
Analyze data						X	X												
Prepare brief report								X											

3.1 Sample Work Plan and Timeline (continued)

Activities	Months																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Market research																		
Conduct in-depth interviews with purchasers, retailers, distributors, potential users					X	X	X											
Analyze data							X											
Manufacturer's Survey																		
Conduct interviews with manufacturers of kit items					X	X												
Design Prototype Kit Contents and Packaging																		
Decide on kit contents							X											
Develop pictorial instructions, and pretest							X	X										
Develop kit package, and pretest							X	X										
Field Trial																		
Assemble prototype kits								X	X	X								
Develop an assembly work plan								X										
Establish kit assembly site and storage								X	X									
Train kit assemblers									X									
Produce sufficient number of kits for field trial									X	X								
Develop a monitoring and quality assurance plan								X										
Develop field trial strategy								X	X									
Data-collection tools								X										
Determine field trial sites								X										

3.1 Sample Work Plan and Timeline (continued)

Activities	Months																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Field Trial (continued)																		
Recruit and train field trial assistants and field trial supervisors								X	X									
Distribute prototype kits to pregnant women									X	X								
Conduct postnatal interviews with women									X	X	X	X	X					
Analyze data												X	X	X				
Modify kit, as needed														X				
Test Market																		
Determine appropriate retail and community outlets											X	X	X					
Determine demand for kits for test market period										X								
Determine distribution channels and distributors											X	X	X					
Decide on kit price													X					
Recruit and train "test market assistants"													X	X				
Develop a promotional strategy for the kits												X						
Determine key messages for each audience													X					
Design/develop promotional materials/activities													X	X	X			
Pretest all promotional materials														X	X			
Sell kits															X	X	X	X
Conduct in-depth interviews with vendors and purchasers																		X

3.1 Sample Work Plan and Timeline (continued)

Activities	Months (Continuation of delivery kit development program)											
	19	20	21	22	23	24	25	26	27	28	29	30
Test Market (continued)												
Modify kit packaging, distribution channels, and promotional channels	X											
Develop an Integrated MCH Strategy												
Select target areas	X											
Develop training strategy	X											
Involve health workers in kit activities	X	X	X	X								
Continue kit assembly		X	X	X	X	X	X	X	X	X	X	X
Distribute the kit			X	X	X	X	X	X	X	X	X	X
Integrate clean delivery practices into health education			X	X	X	X	X	X	X	X	X	X
Promote clean delivery practices and kit use			X	X	X	X	X	X	X	X	X	X
Socially market the kit (see Section 5)			X	X	X	X	X	X	X	X	X	X
Develop monitoring indicators and instruments (see Section 6)	X	X										
Monitor and evaluate			X	X	X	X	X	X	X	X	X	X
Subsidizing and Sustaining Kit Activities												
Determine if production and distribution are cost-effective						X				X		
Determine if supervision and monitoring are adequate				X	X							
Review monitoring activities				X			X		X			X
Modify program strategy based on monitoring data					X			X			X	

3.2 SAMPLE FOCUS GROUP DISCUSSION TOPIC GUIDE FOR MOTHERS

NEEDS ASSESSMENT

Target Audience

Women who have given birth to at least one child within the last two years.

Objectives

- To determine women's traditional birth practices and knowledge.
- To understand their concept of cleanliness during delivery.
- To determine their interest in using a basic delivery kit.

Site

Rural site___

Urban site___

Topic Guide

Introduction

Introduce yourselves and your agency. Describe the objectives of the discussion.

Conduct a warm-up session. Informally, talk about children, pregnant women, agriculture, and other matters of interest to the mothers.

Request that the women talk openly about their delivery experiences. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Ask permission to record them. Explain that participants' answers will be kept confidential.

Have participants introduce themselves.

Delivery Experiences

Encourage all the participants to share their delivery experiences. The facilitator should ask probing questions such as:

- How many children have you had?
- Do you deliver alone at home, at home with the assistance of someone, or at a medical site?
 - If you depend on an assistant, what type of assistant? A relative, friend, untrained TBA, or trained TBA?

Clean Delivery Practices

Questions may include the following:

- What, if anything, do you or your family members do to prepare for delivery?
 - What household items do you prepare?
 - What supplies are purchased in preparation for the delivery?
- We are hearing the expression “clean delivery” more and more in the community. Can you tell me what is meant by “clean delivery?”
 - How would you prepare for a clean delivery?
 - How important is clean delivery for the health of your baby?
- Can you tell me about your hand washing during the delivery process? At what point during the process do you or your assistant wash your hands?
 - Do you use soap to wash your hands? Why or why not?
 - Why do you wash your hands?
- Please tell us about the techniques you or your assistant use for cord care during delivery.
 - How is the cord cut?
 - Who cuts the cord?
 - What is used to cut and tie the cord?
 - What, if anything, is done to prepare the items used to cut the cord?
 - What, if anything, is done to the cord after it is cut?

Delivery Supplies and Equipment

Questions may include the following:

- We talked about the items used for cord cutting. What other supplies do you use during and after delivery?
 - What do you consider the most important supplies for delivery?
 - What, if anything, is done to prepare these items for delivery?
- Who decides which supplies should be purchased for delivery?
 - Who actually buys them?
- Where are these supplies purchased?
 - How difficult or easy is it to get them?
 - How much money is spent on these supplies?
- What do you think about putting all the important supplies in one packet?

Feedback on Sample Delivery Kits

Present three different delivery kit samples to the participants. Show the contents of each kit and ask the women to say whether they would use each component and why.

Start a discussion about the kits:

- Which of the three packets do you prefer?
 - What do you like and dislike about each of them?
 - Which items are necessary/not necessary?
 - Is there anything you do not understand about the kit components? If so, please explain.
 - Is there anything you would add to the kits?
- Which item in these kits is the most useful?

Opinions About Buying Delivery Kits

Questions may include the following:

- What is your opinion about buying a delivery kit?

- Would you buy one if it were available? If not, why not?
 - Do you think other women like you would buy one? If not, why not?
 - If yes, how much would they be willing to pay for one?
 - Where or from whom would they prefer to buy it?
- How could we motivate women who might not be interested in buying a kit?
 - What information about the kit would be important to provide?
- What are the best ways to tell families about the kit?
- How would you describe the kit to other users? To your husband or mother-in-law?
- How much do people usually spend for delivery? For birth rituals?

Kit Packaging

Questions may include the following:

- What would be a good name for the kit?
- Which picture would you like to see on the outside of the packet?
- What color would you prefer for the kit packet?
- What kind of instructions would be helpful to mothers like you?
- What would you do with the components after using the kit?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.3 IN-DEPTH INTERVIEW TOPIC GUIDE FOR HOUSEHOLD PURCHASERS

NEEDS ASSESSMENT

Target Audience

Household purchasers

Objectives

- To identify the purchasing patterns of household members likely to be responsible for health and/or delivery supplies.
- To identify their opinions about a basic delivery kit.

Site

Rural site___

Urban site___

Topic Guide

Introduction

Introduce yourself and your organization. Describe the program briefly. Emphasize that the participant's opinions and experiences are valuable, and that there are no right or wrong answers. Also emphasize that answers are confidential.

Information About the Purchaser

Obtain information about their:

- age;
- relationship to head of family;
- whether this person is responsible for household purchases (if not, then who else in the family buys goods);

- who in the family makes the decisions about purchases of household items such as clothes, food, and medicine;
- distance from the marketplace.

Purchasing Patterns

Questions may include:

- What types of goods do you purchase for the household?
- What are the prices of these goods?
- How often do you purchase these goods?
- Where do you purchase these goods?
- Where do you get the money to purchase them?

Purchasing Pattern for Delivery Equipment

Questions may include:

- Do you purchase special goods for the delivery period?
 - If yes, what items do you purchase?
- Who decides what items should be purchased for the delivery?
- Who actually purchases the items?
- Which of these items are most important? Why?
- When are these items purchased (how long before the baby is due)?
- Where do you purchase them?
- How much do you pay for these items?

Opinion About a Basic Delivery Kit

- How would you feel about being able to purchase all items necessary for delivery in one packet?
- What price would you pay for such a packet?
- Where would you prefer to buy this packet?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.4 SAMPLE QUESTIONNAIRE FOR MERCHANTS

NEEDS ASSESSMENT

Target Audience

Retailers who own or run small shops, drug stores, or market stands.

Objectives

- To determine retailers' selling patterns, clientele, and product line.
- To identify retailers' opinions, ideas, and suggestions about the sample delivery kit.

Questionnaire

Introduction

Introduce yourself and your agency. Describe the objectives of the questionnaire. Ask the retailer to introduce him/herself.

Request that the retailer talk openly about his/her selling patterns and ideas about the product you will show them. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Market area:_____ District:_____

1. How many days is the market open?
 - 1 day a week____
 - 2 days a week____
 - 3 days a week____
 - more than 3 days a week____
2. How many days is your shop open?
 - 1 day a week____
 - 2 days a week____
 - 3 days a week____
 - more than 3 days a week____

3. What do you sell in your shop?
- Vegetables___
 - Rice, pulse, spices___
 - Sugar, tea, biscuits, and cigarettes___
 - Medicine___
 - Fabric and clothes___
 - Other___

4. How much do you sell in a week?
- Vegetables___
 - Rice, pulse, spices___
 - Sugar, tea, biscuits, and cigarettes___
 - Medicine___
 - Fabric and clothes___
 - Other___

5. Who usually buys your goods?
- Men___
 - Women___
 - Children___

6. How much does one person generally buy?

7. Which item do you sell the most, and what is the price of it?

8. How many competitors are there in your market?
- 0-4___
 - 5-9___
 - 10-15___
 - more than 15___

Show the merchant samples of delivery kits, explaining the components and the purpose of the kit. Ask the merchant:

9. Would it be possible to sell the kit in your market?
- Yes___
 - No___

If not, why not? Where do you think it could be sold?

10. If yes, who will buy the product?

Husbands of pregnant women___

Pregnant women___

TBAs___

Others___

11. What type of packaging do you like?

Plastic___

Cloth___

Cardboard___

Other___

12. What would be the appropriate distribution channels for the kit?

Agent___

Wholesaler___

Retailer___

TBA___

Family planning agent___

Other___

13. What places would be appropriate to sell the kit?

Weekly market___

Tea shop___

Fabric shop___

Medical store___

Health post___

Village health committee___

TBA___

Other___

14. What would be a good brand name for it?

15. What would be a good price for it?

16. Do you have any other suggestions?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.5 SAMPLE QUESTIONNAIRE FOR HEALTH STAFF, NGO STAFF, AND COMMUNITY HEALTH WORKERS

NEEDS ASSESSMENT

Target Audience

Health program staff, NGO staff, and community health workers who have experience in delivery kit projects.

Objectives

To gather information from experienced agencies and individuals about preferred packaging, marketing, and distribution channels for a basic delivery kit.

Questionnaire

Introduction

Introduce yourself and your agency. Describe the objectives of the questionnaire. Ask the respondent to introduce him/herself.

Request that the respondent talk openly about his/her store/pharmacy and ideas about the product you will show. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Name of the organization: _____

Type of organization: _____

Address: _____

Organization's activities: _____

Working areas: _____

First, ask the staff member to describe his/her experience with the basic delivery kit in detail. Then obtain more information about his/her ideas for marketing and distribution of the kit by asking the questions below:

1. Is it possible to sell a basic delivery kit in the market?

Yes _____

No _____

2. Who will buy the product?
 Husbands of pregnant women____
 Pregnant women____
 TBAs____
 Others____
3. What type of packaging do you like?
 Plastic____
 Cloth____
 Cardboard____
 Other____
4. What would be appropriate distribution channel(s) for a basic delivery kit?
 Sales agent____
 Retailer____
 Small shop____
 Family planning worker____
 Health worker____
 Women's organization____
 TBAs____
 Community-based distributors____
 Other____
5. Which place(s) would be appropriate to sell a basic delivery kit?
 Weekly market____
 Tea shop____
 Fabric shop____
 Medical store/pharmacy____
 Health post____
 Village health committee____
 Other____
6. What would be a good brand name for it?
7. What would be a good price for it?
8. Do you have any other suggestions?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.6 SAMPLE QUESTIONNAIRE FOR MEDICAL STORES AND PHARMACIES

NEEDS ASSESSMENT

Target Audience

Retailers who own or run medical stores and pharmacies.

Objectives

- To determine medical store and pharmacy retailers' selling patterns, clientele, and product line.
- To identify retailers' opinions, ideas, and suggestions about the sample delivery kit.

Questionnaire

Introduction

Introduce yourself and your agency. Describe the objectives of the questionnaire. Ask the respondent to introduce him/herself.

Request that the respondent talk openly about his/her store/pharmacy and ideas about the product you will show. Emphasize that there are no right or wrong answers. All their beliefs, experiences, and opinions are valuable.

Name of respondent or business: _____

Address: _____

How many patients will come for a check-up every (if applicable)

Day_____

Week_____

Month_____

What types of medicines do you sell?

How much do you charge for oral rehydration salts? (ORS is an example of another socially-marketed MCH health product that families purchase to prevent or treat diarrheal disease in children. When considering introducing basic delivery kits into a similar market, it is useful to collect information about medical retailers' experience with ORS.)

Who buys oral rehydration salts?

Men___

Women___

Children___

How did they learn about oral rehydration salts?

Newspaper___

Radio___

Poster___

Public loudspeakers___

Health workers___

Other___

How do you and others bring oral rehydration salts here?

Agent___

He/she goes to market___

Other___

How often do you buy the oral rehydration salts?

Every week___

Every 2 weeks___

Every 3 weeks___

Once a month___

After more than a month___

How many packets do you sell per

Day___

Week___

Month___

Describe the basic delivery kit in detail. Show delivery kit prototypes, explain the components, and discuss the purpose of the delivery kit. Then ask the following questions:

Is it possible to sell this type of delivery kit in your medical shop/pharmacy?

Yes___

No___

Who would buy the kits?

Men___

Women___

Children___

What type of packaging do you like?

Plastic___

Cloth___

Cardboard___

Other___

Which places would be appropriate to sell the kit?

Weekly market___

Clothing shop___

Small food store___

Supermarket___

Medical shop/pharmacy___

Medical shop___

Health post___

TBA___

Other___

What would be the appropriate distribution channel(s) for it?

Agent___

Wholesaler___

Retailer___

TBA___

Family planning agent___

Other___

What would be the appropriate advertising media for promoting the kit?

Poster___

Instruction___

Radio___

Newspaper___

Public loudspeakers___

Other___

What would be a good brand name for the kit?

What would be an appropriate price at which to sell it?

Would you be interested in selling this product in the future?

Yes___

No___

Why?

Do you have any other suggestions?

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.7 MANUFACTURERS' SURVEY FORM

NEEDS ASSESSMENT

Target Audience

Manufacturers who produce one or more kit items.

Objectives

- To determine manufacturers' product line, market share, and production capacity.
- To identify manufacturers' level of interest in producing or subsidizing kit components.

Survey Guide

Introduction

Introduce yourself and your agency. Describe the objectives of the survey. Ask the respondent to introduce him/herself.

Request that the respondent talk openly about his/her manufacturing site and experiences. Emphasize that there are no right or wrong answers. All his/her ideas are valuable.

Identification of the Producer

Company name: _____
Address: _____
Telephone: _____
E-mail: _____
Person(s) interviewed: _____
Name of kit item produced: _____

Quality of Item

Topics and questions that are useful to include in the survey may include, but are not limited to, the following:

1. Please describe the quality of your product and how it compares in price with the same product manufactured by other companies.
2. Who is your biggest customer for this item?
3. Which company is your biggest competitor for this product?
4. How is your product different from that of other manufacturers?

Production and Supply

5. Would you be prepared to supply your item(s) in special orders to our organization?
 Yes____
 No____
6. Based on the quantity of products that we will need over a six-month and one-year period, what would be the wholesale price of a six-month supply? Of a one-year supply?
7. Will you cut the product to our specifications prior to delivery? If so, is this included in the price? If not, what is the cost?
8. Do you deliver the product? If not, how is it distributed?
9. If you deliver, what type of delivery schedule could be arranged for our assembly site?
10. If you do not deliver, how will these items be delivered?
11. How much is the delivery cost?
12. Please provide us with references of other businesses that depend on you to deliver supplies.
13. What guarantees do you provide for timely distribution of the supplies?

14. Who is responsible if we are not satisfied with the quality of the product or the delivery schedule?

Willingness to Subsidize the Product

15. Would you be willing to sell your product at a subsidized rate?
Yes___ If so, what would be the rate?
No___ If not at this time, what issues would you need to consider before deciding to subsidize the product?
16. Would you be willing to subsidize the kit by supplying other products that we decide to put into the kit?
Yes___ If so, which products would you contribute?
No___

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.8 EXAMPLE OF A FIELD TRIAL ORIENTATION FOR COLLABORATING NGO STAFF WHO WILL WORK AS FIELD ASSISTANTS

FIELD TRIAL

The Save the Children Alliance (Save the Children/US, Save the Children/UK, Redd Barna) is developing a simple, low-cost, disposable delivery kit that will eventually be sold through commercial channels.

There are four phases to this research project. Phase I, the needs assessment portion, includes information-gathering activities in three areas in Nepal: Siraha, Surkhet, and Lamjung. These areas were chosen to represent different ethnic and geographic variations that could influence the purchase and use of a delivery kit.

Based on this very preliminary information, choices were made about prototype kit design and contents. The simple kit is based on the WHO concept of the “six cleans,” including clean hands, clean delivery surface, and clean cord tying and cutting implements. In addition, a clean cutting surface has been added, because preliminary research shows that birth attendants use dirty surfaces for cutting the cord. Finally, we have included a pictorial insert that shows how to use the kit contents.

Phase II of the project is to test the prototype kit during actual deliveries in representative areas of Nepal. The Save the Children Alliance requests your assistance in implementing field activities for the second phase of the project. The objective of this phase is to test prototype delivery kits in representative areas of Nepal. We also want to assess people’s comprehension of the pictorial insert and use of the delivery kit. To test the kit, we request your help in doing the following:

1. Identify up to five women in your area who are seven to nine months pregnant who will be in the same location following delivery. If any of them will be in another location/district after delivery, determine how to locate them.

2. Briefly explain that you are testing a kit to be used during deliveries (but do not explain how to use the kit—one of the goals is to test comprehension of the pictorial insert). Explain that you would like her to use the kit during her delivery. Explain that the kit will make delivery preparation easier and more convenient.
3. Give her a sample kit.
4. Complete a registration form (Work Tool 3.11) for each woman to whom you give a sample kit.
5. Return within two weeks after her delivery (the sooner, the better), and interview her using the interview form. Encourage the presence of the mother-in-law, husband, or whoever else assisted or was present during the delivery.
6. The voluntary services organization (VSO) volunteers should either send or bring in the interview forms and unused kits to Save the Children/US. The project will reimburse the cost of the registered parcel post upon receipt of the bill.
7. If possible, observe deliveries while the kits are used, and fill in the observation forms. We realize this may be very difficult, but it would be extremely useful. Do not intervene in the use of the kit contents.

We appreciate your assistance during this phase of the project. We hope to collect user feedback from as many areas of Nepal as possible, in order to design a kit that is acceptable and affordable. We would also appreciate any other suggestions you may have concerning kit design, promotion, and distribution. We will share the findings of the research with you at the end of the final phase (test market) of the project.

Thank you for your assistance.

Enclosures (to be given to field workers with the above letter)

- Leaflet explaining project
- 5 clean delivery kits (for distribution)
- 1 opened delivery kit
- 5 interview forms
- 5 observation forms
- 5 antenatal registration forms

Field Assistant Orientation

1. Field assistants should have the following characteristics:
 - Be knowledgeable about the local area.
 - Have knowledge of health.
 - Have some knowledge of interview or survey techniques.
 - Be willing to travel into areas by foot to identify pregnant women and to conduct follow-up interviews.
2. Orientation:
 - Give overview of project and explain rationale for field trials.¹⁶

3.9 RESPONSIBILITIES OF FIELD TRIAL WORKERS AND FIELD SUPERVISORS

FIELD TRIAL

Field Trial Workers

Each field trial worker will have the following responsibilities:

1. Identify a mother who is about seven to nine months pregnant.
2. Register the mother using the registry form.
3. Supply the kit in her seventh, eighth, or ninth month of pregnancy.
4. Administer the postnatal questionnaire within one month after delivery.

If the mother is eight to nine months pregnant during the time she is registered, the kit must be supplied immediately. The field trial worker must explain the purpose of the basic delivery kit but should not discuss how the contents are used. The kit should not be opened until the time of delivery. The field trial worker should also inform the mother that she will return within one month of delivery to ask about her use and acceptance of the kit.

Field Investigators

The field investigators will be responsible for supervising the field trial workers.

The supervisors should ensure that:

1. Only women who are seven- to nine-months pregnant are registered.
2. Registry forms are completed correctly.
3. A kit is supplied to the mother in her seventh, eighth, or ninth month of pregnancy.
4. A postnatal follow-up is conducted within one month after delivery.
5. The postnatal questionnaire is completed properly.
6. The reports (registry forms and postnatal questionnaires) are submitted on time.

7. Each field trial worker has covered ___ pregnant mothers for a ___-month period.
8. All activities are on schedule.

The field trial workers will be accompanied by the field investigators during the first three postnatal interviews. The supervision will be continued weekly by meetings between the field investigators and field trial workers. A monthly meeting will be held to monitor the progress of the field trials and to problem-solve.

Consolidating the Postnatal Questionnaires

The field investigators will start collecting and consolidating the postnatal questionnaires as soon as they are completed. Consolidated data will be submitted to the research assistants who will analyze all data. All information should be available at the main office ___ months after the start of the field trial.¹²

3.10 SAMPLE FIELD TRIAL WORKER TRAINING CURRICULUM

FIELD TRIAL

Time Duration: 1 day	Content	Methods and Materials
10:00 a.m. to 12:30 p.m.	<ul style="list-style-type: none"> • Introduction • Objectives of program, kit contents • Objective of field trial • Target of kit testing in the area • Total number of postnatal interviews • Time duration for field trial • How to identify and select pregnant mothers • How to register the pregnant mother • In-depth interview techniques 	<ul style="list-style-type: none"> • Register • Basic delivery kit • Discussion • Observation forms • Role plays
12:30 to 1:00 p.m.	<ul style="list-style-type: none"> • Lunch 	
1:00 to 4:00 p.m.	<ul style="list-style-type: none"> • Briefing the pregnant mother about basic delivery kits • When to interview postnatal mother • How to communicate with health-related government organizations and NGOs in district • Reporting procedures 	<ul style="list-style-type: none"> • Role play to practice interview techniques and filling out the data forms¹⁶

3.11 SAMPLE PREGNANT WOMAN REGISTRATION FORM

FIELD TRIAL

Contact Information

Name of woman: _____ Age: _____

Address: _____

Total number of children: ____ Male: ____ Female: ____

Location where she can be found after
delivery: _____

Date of first contact: _____

Date of follow-up visit: _____

Date of subsequent visits: _____

Approximate date of delivery: _____

Instructions

1. Introduce yourself and explain basic delivery kit distribution.
2. Register only women who are seven to nine months pregnant. Obtain consent for participation.
3. Give pregnant woman the basic delivery kit, and explain that you will return within two weeks of delivery to ask her questions about her experiences with the kit.
4. Thank the woman for her participation.
5. Give an approximate time for the return visit, and verify a location where she can be found.¹⁶

3.12 SAMPLE POSTNATAL INTERVIEW QUESTIONNAIRE

FIELD TRIAL

Interviewer name: _____
 Interview number: _____
 Site: _____

Target Audiences

Women who used the delivery kit during their most recent delivery.

Objectives

- To identify the clean and unclean practices of the mother and/or her attendant during the birth.
- To determine how and why each kit item was used or not used.
- To identify how kit items are disposed of.

Identification Information

- Full name: _____ Age: _____
- Husband's name: _____
- District: _____
- Date of delivery: _____
- Date of interview: _____

General Introduction

Explain that you wish to ask the woman and/or her helper some questions about her delivery. (If the interviewer did not observe the delivery, ask all questions. If interviewer was present at the time of the delivery, begin with question 14.)

1. Was the kit used? Yes___ No___
 If no, why?

2. What surface was put under you for delivery?
 - Plastic sheet from kit___
 - Cloth from home___
 - Sack from home___
 - Nothing___
 - Do not know___
 - Other (specify)_____

3. While waiting for the placenta to be delivered was the baby wrapped?
Yes___ No___

4. Who cut the baby's cord?
 - Trained TBA___
 - Untrained TBA___
 - Self___
 - Relative___
 - Husband___
 - Friend___
 - Other (specify)_____

5. What did this person use to wash his/her hands? Soap from the kit?___
Other soap?___

If he/she used soap to wash his/her hands, ask when:

 - Before delivery only___
 - Before cord cutting only___
 - Before delivery and again before cord cutting___
 - After cord cutting only___
 - Both after and before cord cutting___
 - No response___
 - Other (specify)_____

6. What did this person use to tie the cord?
 - Thread from kit___
 - Other thread___
 - New thread___
 - Other (specify)_____

If thread from the kit was used, how many ties were used?_____

7. What did this person use to cut the cord?
 - Razor blade from kit___
 - Other new razor blade___
 - Old razor blade___
 - Sickle___
 - Other (specify)_____
8. What cutting surface was used to cut the cord?
 - Cutting surface from kit___
 - Wooden piece___
 - Old razor blade___
 - Coin___
 - Nothing___
 - Other (specify)_____
9. What was put on the cord after the cutting?
 - Nothing___
 - Ashes___
 - Mustard oil___
 - Animal dung___
 - Cloth___
 - Other (specify)_____
10. How were the kit contents disposed of?
 - Cleaned and put away___
 - Burned___
 - Buried___
 - Other (specify)_____
11. If the kit contents were kept, what items were kept?
12. (Show the items of the kit.) Please tell us:
 - Whether or not you used the items.
 - How each item was used and the order in which the item was used?

Interviewer: Give respondent kit and fill in the chart below.

Item	Item Used?	In which order used?	How was the item used?
Pictorial instructions			
Soap			
Plastic sheet			
Razor blade			
Cord ties			

13. How did you know how to use the kit contents?

- Looked at pictorial insert___
- Health worker/volunteer explained___
- Other (specify)_____

14. Did you or your helper look at this insert before delivery? (Show mother insert.)

Yes___ No___

If yes, was it helpful in knowing how to use the items in the kit?

Yes___ No___

If no, why wasn't it helpful?

- Did not understand pictures___
- Already know procedures___
- No response___
- Other (specify)_____

15. Review each picture and list the general interpretation of each picture on the pictorial insert. Briefly explain what is happening in each picture.

- _____
- _____
- _____
- _____
- _____
- _____

16. What did you like about this basic delivery kit? (Check all responses.)

- Convenience___
- Safety___
- Insert picture___
- Logo design on box___
- Color of box___

- New kit___
- Special kit___
- Other (specify)_____

17. What didn't you like?

18. Would you buy this kit for your next delivery?

Yes___ No___ Don't know___ Not up to her___

If yes, why?

If no, why not?

- Not needed because kit contents are already in home___
- Not available___
- Cost___
- No response___
- Objection from family___
- Other (specify)_____

19. How much would you or your family be willing to pay for this kit?_____

20. Would you advise your relative/neighbor to use this kit?

Yes___ No___

21. What did you think about the color of the kit?

- Like___
- Dislike___
- No response___
- What would be a better color to use?_____

22. What do you think of the picture on the kit?

- Like___
- Dislike___
- No response___
- How would you improve the picture on the kit?
- From the picture on the box, what do you think the purpose of this kit must be?

23. What is the best way for families to hear about where to buy such a kit? (Check all responses.)

- Radio___
- Poster___
- Flyers___
- Community health workers___
- Public loudspeakers___
- Medical shop/pharmacy___
- TBAs___
- Women's groups/mothers' groups___
- Female community health workers___
- Religious/social leaders___
- Folk media___
- Other (specify)_____

24. Where would be the best place for families to buy such a kit? (Check all responses.)

- Small shops___
- Medical shop/pharmacy___
- Weekly market___
- Health post___
- Community health worker___
- TBA___
- Women's groups___
- Other (specify)_____

25. During the delivery, which kit contents were not used?

26. Why were they not used?

27. How would you make this kit better?

28. Please give your suggestion for a brand name.

29. During the delivery, what other items did you use from your house or elsewhere that were not in the kit?

30. Special remarks or additional comments:

Thank you!

Your experience and help will be beneficial in developing the basic delivery kit.

3.13 SAMPLE FIELD ASSISTANT TRAINING CURRICULUM³

TEST MARKET

Day 1

Time	Subject	Methods and Materials
10:00 to 10:15	Welcome/Introduction of participants	Registration forms
10:15 to 11:30	Overview of Program <ul style="list-style-type: none"> • Program objectives • Description of basic delivery kit (contents) • Summary of need assessment and field trial findings 	Brochure Discussion Summary papers
11:30 to 1:30	Objective of Test Market <ul style="list-style-type: none"> • Who buys basic delivery kits? • How should kits be promoted? • Where would kits be purchased? • What will be the distribution channels? 	
1:30 to 2:30	Tea break	
2:30 to 4:00	Role and Responsibilities of Field Assistants <ul style="list-style-type: none"> • Identify distribution channels • Supply kits • Resupply kits and collect money • Distribute and post promotional materials • Price and profit margin for distributor • Orient and supervise TBAs/female community health workers • Communicate with health workers, shopkeeper, and others • Assess promotional materials • Interview distributors, users, purchasers, NGOs • Collect balance of kits at the end of test market 	Promotional materials Interview forms Role play

3.13 Sample Field Assistant Training Curriculum (continued)

Day 2

Time	Subject	Methods and Materials
10:00 to 12:00	Promotional Materials <ul style="list-style-type: none"> • Where to hang posters • Amount of promotional materials in each area • Distribute flash card 	Interview forms Discussion Role play
12:00 to 1:30	Assessing Promotional Materials <ul style="list-style-type: none"> • What to assess • Who, where, and how many will be interviewed 	
1:30 to 2:30	Tea break	
2:30 to 3:30	<ul style="list-style-type: none"> • Interview/Reporting forms • Questionnaire with shopkeeper, user, purchaser, NGOs, and governmental organizations 	Interview forms Role play Discussion Topic guide
3:30 to 4:00	Administrative Issues <ul style="list-style-type: none"> • Distributing kits, promotional materials • Whom to contact for any problem • Supervision 	

W O R K T O O L S

3.14 SAMPLE WEEKLY RECORD FORM

TEST MARKET

Name:				Date:		
District Health Post:						
Number of Outlets Visited:						
Outlet Name	Kit Distribution	Total Number of Kits Sold	Money Collected	Resupply of Kit	Balance	Comments

3.15 SAMPLE TEST MARKET DATA TABLES FROM NEPAL PROJECT⁵

TEST MARKET

Table 1: Record of Kits Supplied and Sold

Name of the Area	Supplied	Kits Sold	Kits Returned
Kavre District:			
Bhumlutar Ilaka Health Post	170	166	4
Dapeha Ilaka Health Post	92	92	-
Nala Ilaka Health Post	52	39	13
Khopasi Ilaka Health Post	225	213	12
Phaehkhal Ilaka Health Post	314	314	-
Kavre JC FPEP	75	75	-
Adra	3	1	2
Parsa District:			
Birgunj Ilaka Health Post	176	176	-
Satworiya Ilaka Health Post	175	175	-
Bageswori Ilaka Health Post	192	192	-
Bisrampur Ilaka Health Post	206	206	-
Sirsiya Ilaka Health Post	141	141	-
Lumbini Zone:			
Nepal CRS Company	400	399	-
CARE Nepal	13	13	-
SC/US Siraha Prototype Kit Terai	125	125	-
Total	2359	2327	31

Table 2: Type of Outlet Percentage

	Small Shop	Female Community Health Volunteer	TBA	Worker and Women's Groups	Medical Shop	Total
Kavre District:						
Khopasi Ilaka Health Post	2	39	-	1	5	47
Dapeha Ilaka Health Post	12	9	1	-	6	28
Bhumlutar Ilaka Health Post	1	7	26	7	3	44
Nala Ilaka Health Post	12	10	1	1	8	32
Phaekhal Ilaka Health Post	-	44	29	7	7	87
Kavre JC FPEP	-	-	-	42	-	42
Parsa District:						
Sirsiya Ilaka Health Post	-	56	30	-	6	92
Satworiya Ilaka Health Post	27	19	13	1	14	74
Bisrampur Ilaka Health Post	2	41	26	-	16	85
Birgunj Ilaka Health Post	1	51	7	-	28	87
Total Number	57	276	133	59	93	618
Percentage of Total	9.20%	45%	21.50%	9.50%	15%	100%

(Credit: Maternal and Child Health Products, Ltd.)

W O R K T O O L S

3.16 SAMPLE FIELD ASSISTANT RETAIL OUTLET FORM⁵

TEST MARKET

Name of field assistant:											Date:	
Visit number: 1 2 3 4 5 6 7 8 9 10 11 12												
District name:											Health post name:	
Number of kits supplied initially:												
Number of kits resupplied:												
Amount of money collected:												
Name of Outlets				Number of Kits Sold				Money Collected			Number Resupplied	
Total:												
Comments				Shops		CHV/TBA/WG*			Pharmacies			
1. Who bought the kit? a. Husband b. Mother-in-law c. Mother of pregnant woman d. TBA e. Other, specify												
2. How did they learn about the kit? a. Poster b. Flyer c. Dangler d. Flash card e. TBA f. Community health worker g. Doctors, nurses h. Literacy class students												
3. Other Comments:												

* Community health volunteer/traditional birth attendant/women's group

3.17 SAMPLE FOCUS GROUP DISCUSSION TOPIC GUIDE FOR ASSESSING PROMOTIONAL MATERIALS

TEST MARKET

Target Audience

Women, men, and TBAs.

Objectives

To assess promotional materials by conducting focus group discussions (FGDs) and in-depth interviews (IDIs) with various target audiences.

- Conduct FGDs with at least two groups of five to eight women per health post.
- Conduct FGDs with at least two groups of eight to ten men per health post.
- Conduct IDIs with ten trained TBAs in selected health posts.
- Conduct IDIs with five to ten shopkeepers (e.g., medical shops, pharmacies, and grocery shops) near each health post.

Topic Guide

Introduce yourself and your agency. Describe the objectives of the group discussion. Ask the respondents to introduce themselves. Request that the respondents talk openly about their opinions, ideas, and experiences.

Assure participants that the discussion is confidential. Ask the following questions, clarify responses, and encourage discussion by using probing/supporting questions.

Awareness of the Kit

- Are you aware of the basic delivery kit? If so:
 - What have you heard of the delivery kit?
 - How did you hear of the delivery kit?
 - What type of promotional materials have you seen (such as posters, flash cards, or dangles)?
 - Where did you see these materials?

Pretest of the Promotional Materials

- What information is this material trying to convey?
- What does the picture show?
- Are these materials telling you to take any kind of action? If so, what?
- What do the words mean? Are there any words you do not understand? Which words? (If so, explain the meaning of the word and ask the respondents to suggest other words that can be used to convey that meaning.)
- Do the words match the pictures?
- Are there any other words that you think others might have trouble reading or understanding? (If so, ask for alternatives.)
- How do you feel about these materials generally?
- What do you like about these materials? What do you dislike?
- Specifically, what do you think about the design, color, size, and quality of paper and picture?
- Please tell us how we should let others know about the delivery kit. Where are good places for posters?
- We want the materials to be as good as possible and easily understood by others. Please tell us how you would improve the promotional materials.

Conclude the discussion and thank the group for their cooperation.

3.18 PRETEST GUIDE FOR THE PICTORIAL INSERT AND KIT PACKAGING

Sample Questions for Group Pretests

1. What information is this page trying to convey?
2. If there is a picture, what does it show? Is it telling you to do anything? If yes, what?
3. Do the words match the picture on the page? Why or why not?
4. What do you like or dislike about this page?
5. Are there any words in the text you do not understand? Which ones? Please suggest other words that can be used to convey that meaning.
6. Are there any words that you think others might have trouble reading or understanding? (Again, ask for alternatives.)
7. Are there sentences or ideas that are not clear? (If so, have respondent show you what they are.) After explaining the intended message, ask the group to discuss better ways to convey the idea.
8. Is there anything you like or dislike about this insert—such as use of colors or kinds of people represented?
9. We want the materials to be as good as possible and easily understood by others. How can we improve the pictures and the words?

W O R K T O O L S

3.19 SAMPLE DELIVERY KIT COST BREAKDOWN FROM NEPAL

Kit Item	Specification	Cost
Cardboard box	Box measures 3 in. x 4½ in. x 1 in. Box is red in color with both black and white lettering in Devenargi and Roman script. The front panel shows a picture of a mother sitting holding her newborn baby, and the back panel shows a picture of a birth attendant using the thread, blade, and plastic circle to properly cut and tie a newborn's umbilical cord. A long side panel shows labeled pictures of all the included items in the kit.	Rs/=89 for 1 box. Local Kathmandu printers produce both the box and insert.
Paper instructional insert	A paper strip measuring 3½ in. x 2.1 in. with ten pictures and printed instructions showing proper use of the kit for ensuring a clean delivery.	Rs/=50 per piece.
Plastic wrapper number 1	A thin, heat-sealed plastic wrapper measures 3¼ in. x 4¾ in.	Plastics are usually sold by weight. Rs/=100 per kg. 1 kg yields approx. 300 pieces=Rs/0.33 per.
Plastic sheet	36 in. x 36 in., 100-gauge plastic film sheet.	Roll of plastic comes in 20 to 25 kg amounts, 100 rupees per kilo. 24 pieces per kg. Per piece Rs/=4.16.
Soap	1 in. x 1¾ in. x ¼ in. piece of Soltee Brand soap.	Per piece Rs/=94.
Plastic wrapper number 2	A smaller, heat-sealed wrapper measuring 3 in. x 3¼ in.	1 kg yields approx. 350 pieces. Rs/=100 per kg. Rs/=28 per piece.
Thread	Three 9-inch pieces of strong thread.	"Modi" brand of rolled thread. Rs/=0.25 per three pieces.
Blade	One high-quality, double-sided, stainless steel, inside a factory-sealed wrapper.	Rs/=2.03 per piece for "365" brand.

Rs/=means Nepali Rupees

Total kit cost=Rs/=15

Additional costs

Labor cost—0.40 per kit

Shipping box—0.10 for 144 piece box; 0.20 for 40 piece box

Cellotape and shipping tape—0.10

Overhead and management cost—2.81 rupees per kit

(Credit: Maternal and Child Health Products, Ltd.)

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KIT ASSEMBLY

4

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SECTION 4

KIT ASSEMBLY

SUMMARY

Section 4 reviews all the action steps required for assembling basic delivery kits including:

- writing a work plan,
- determining the number of kits to assemble,
- developing a budget,
- procuring raw materials and supplies,
- locating the assembly site,
- recruiting and training assemblers,
- setting up the assembly site,
- setting up the storage site, and
- writing a monitoring and quality assurance plan.

4.1 WORKING WITH THE COMMUNITY

This section provides information for kit assemblers from commercial projects, maternity facilities, and community-based organizations (CBOs). The focus, however, is on the advantages of working with CBOs. A delivery kit assembly site provides community members with excellent opportunities to upgrade their skills and generate additional income. Community participation, especially women's participation, therefore, should be promoted.

Creating a natural network of women's groups around the issue of clean delivery will help raise awareness of clean delivery practices, and may further stimulate people to seek creative solutions to harmful practices. Depending on local circumstances, kit project managers may choose to create such a network, or perhaps build on networks established by existing women's groups; working within existing structures often enhances potential for sustainability. Kit project managers should investigate local community groups to determine which groups might be appropriate for and interested in collaboration.

Women's Groups in South India Achieve High Quality Assurance

While local kit assembly offers flexibility with respect to kit content and design, it is important to standardize kit components and production to ensure consistency and quality. In South India, the Rural Women's Social Education Centre, a grassroots women's organization, initiated a field study on the feasibility of developing a simple delivery kit through local women's groups. The study, conducted in late 1990, found that the quality assurance of kit production was better when it was managed by local women's groups rather than individual women.¹

4

4.2 STEPS FOR ESTABLISHING KIT ASSEMBLY SITES

Kit project managers should base many of their decisions about kit assembly on the needs assessments discussed in Section 3 and input from the community's village councils or village health committees. Together, kit project managers and community members can develop appropriate guidelines that determine who the kit assemblers will be, which facilities will serve as assembly and storage sites, and how employment issues such as salaries, incentives, and workload will be addressed.

The following 11 steps provide a framework for establishing kit assembly sites. They can be adapted to local circumstances as needed.

Step 1: Develop a work plan.

Kit project managers should develop a work plan that outlines each step needed to establish a kit assembly site. Steps should include the following activities:

- procuring raw materials and equipment required to assemble kits;
- establishing kit assembly sites and storerooms;
- training assembly staff, including master trainers, assemblers, and supervisors;
- orienting staff to kit assembly procedures;
- supervising kit assembly;
- maintaining quality assurance standards; and
- monitoring and evaluating production quality and capacity.

The work plan should clearly identify and state who is responsible for each activity. It should be limited to a specified time period (for example, one year). Work Tool 4.1 provides a sample work plan that outlines the process for establishing a kit assembly site.

Step 2: Determine the number of kits to assemble each month or year.

Determining the number of kits to assemble within a given timeframe is a critical decision that will affect many project activities. The target number of kits must be as accurate as possible. It should be based on the community's true situation and factors such as the total number of kits needed to meet demand, the number of assemblers available, the scale of production, and the regularity of the distribution methods chosen.

Table 2 lists the information needed to determine the quantity of kits to be assembled each month or year. The data are based on a hypothetical district. Work Tool 4.2 provides a blank worksheet that kit project managers can use to estimate the number of kits to assemble per year/month.

Work Tool 4.3 provides a blank worksheet for calculating the number of delivery kits for different types of sites.

Step 3: Procure raw materials and supplies.

Cost-effective procurement of the raw materials and supplies needed for assembling the kits is key to keeping costs down. As discussed in Section 3, it is important to be conservative in determining kit contents and to negotiate costs with the manufacturers.

Table 2. Estimated Number of Kits to Assemble²

Information	Equation	Calculation	Final Data
Population in District Z	n/a	n/a	100,000
Annual birth rate	n/a	n/a	30/1,000
Total no. of births per year	Population multiplied by birth rate	$100,000 \times 30/1,000$	3,000
Estimated no. of home deliveries	70 percent of total births	$3,000 \times .70$	2,100
Estimated no. of deliveries in maternity facilities using delivery kits	10 percent of total births	$3,000 \times .10$	300
Total no. of deliveries to be covered by delivery kits	Home deliveries plus maternity-facility deliveries using same delivery kits	$2,100 + 300$	2,400
Annual requirement of delivery kits*	Total deliveries covered plus 20 percent for wastage/loss	$2,400 + (2,400 \times .20)$	2,880
Monthly requirement of delivery kits	Annual requirement divided by 12	$2,880 \div 12$	240

n/a = not applicable

*At all facilities, a buffer stock of 20 percent should be maintained so that supplies do not run out.

Kit project managers should base their procurement on the results of the manufacturers' survey conducted during the needs assessment (see Section 3), which obtained important information about availability, cost, quality, bulk-purchase options, and manufacturers' willingness to subsidize prices.

During negotiations, kit project managers should make sure that manufacturers understand that:

- they are competing with other manufacturers to provide the lowest price, and should offer the most competitive price possible;
- the basic delivery kit is a socially beneficial product (a point that may encourage them to subsidize their price);
- to keep kit costs down, kit project managers need lower- rather than higher-priced items, while still maintaining the quality of the material.

Kit project managers should purchase materials in quantities that will last for three months. Very large quantities can create storage problems and, over time, can lead to decreased quality of supplies.

Step 4: Develop a budget.

The initial estimates of program costs should include the salaries for all of the staff involved in the project as well as the cost of the kit contents, packaging, assembly and storage sites, and distribution.

Payment for Assemblers

If possible and consistent with local policies, the kit assemblers should earn either salaries or a payment for each kit assembled. If assemblers are members of voluntary organizations, the organization may require payment for each kit. Payment to volunteer organizations helps strengthen their activities for improving health.

Calculating Costs

To determine the combined cost of the basic delivery kit materials, assembly, storage, and distribution, kit project managers should develop a table that includes:

- costs of all materials and supplies required for assembly,
- salaries of assemblers and supervisors,
- salaries of staff from nongovernmental organizations (NGOs) or ministries of health (MOHs),
- payment to voluntary organizations,
- lease costs for assembly and storage sites, and
- payments (commissions) to distributors.

Table 3 provides the combined costs for a hypothetical kit assembly program. Costs will vary from location to location, and should be adjusted to each situation.

Step 5: Locate the assembly site.

Kit project managers should establish a central or multiple kit assembly site(s) in either a major township or a local village. Each type of location offers several advantages and disadvantages (Table 4). Using several local sites can become problematic, particularly with respect to maintaining adequate supplies of components and consistent quality of the kits. The use of a single, central site maintains quality assurance and avoids the need for additional storeroom space or complex distribution networks.

Table 3. Example of Combined Kit Assembly Costs
(cost units are units of currency)

Kit Items and Salaries	Quantity per Kit	Specifications	Manufacturer	Make / Brand	Bulk Cost	Cost per Unit	Cost per Kit	Cost per 100 Kits
Polyethylene packing bag	1	18 x 13 cm	X plastic factory	Local	64.00/kg (250 bags/kg)	0.26 per bag	0.26	26
Soap bar for making soap pieces	1 piece	150 gm of soap bar (each bar cut into 15 pieces)	Soap factory	Sweet Soap	49.20 per dozen	4.10 per bar, 0.27 per piece	0.27	27
Razor blade	1	Stainless steel	Razor factory	Topaz	4.00 for 5 blades	0.80 per blade	0.8	80
Wrapping paper pieces	1 piece	Paper sheet: 90 x 45 cm (each sheet cut into 30 pieces of 20 x 13 cm)	Paper manufacturer	Local	36.00 for 24 sheets	1.50 per sheet, 0.05 per piece	0.05	5
Ball of thread or string for making cord ties	3 ties	50 m ball (each cut into 333 cord ties of 15 cm each)	JR Thread factory	Twine and thread	5.00/ball	0.015 per tie	0.045	4.5
Plastic sheet	1	1 meter square	X plastic factory	Local	2,500/25 kg roll	4.16/piece	4.16	416
Pictorial instruction sheet	1	—	Printing company	—	—	.15 per sheet	0.15	15
Kit assemblers' salaries	—	5 assembly workers	—	—	50 kits/hr, paid 10.00/hr each	—	1	100

Table 4. Advantages and Disadvantages of District and Local Sites

District/Town Level	Local/Community Level
<p>Advantages:</p> <ul style="list-style-type: none"> • Distribution of kits to various parts of the district is easier due to existing distribution channels. • Supervision is easier; ensures uniform quality of kits. • Kit assembly staff from established organizations may be more stable. <p>Disadvantages:</p> <ul style="list-style-type: none"> • No involvement of peripheral health staff or the community in kit assembly. 	<p>Advantage:</p> <ul style="list-style-type: none"> • Involvement of peripheral health staff and community members will increase acceptance and promotion of kits. <p>Disadvantages:</p> <ul style="list-style-type: none"> • After assembly, kits may have to be sent to the district for further distribution. • If the assembly site supplies different areas of the district, a more complex, costly distribution system may be required. • Multiple community-based kit assembly units may be difficult to supervise. • Quality of kits may vary from one kit assembly unit to another. • Quality assurance is limited. • Higher turnover of kit assemblers who are volunteers or seasonal workers. This may affect the kit quality.



Photo: MCHP

Delivery Kit assembler cutting soap.

Step 6: Purchase assembly equipment.

The types of equipment used by assemblers will vary depending on the kit contents. Table 5 provides an example of the equipment and supplies required for assembling delivery kits at a hypothetical assembly site. Work Tool 4.4 provides a blank worksheet for assessing the cost of assembly equipment.

Step 7: Recruit assemblers.

Methods of recruiting assemblers vary depending on whether assembly will be conducted in a central or urban area or a rural village. In urban areas, assemblers can be recruited through NGOs, women's groups, or existing income-generating groups. In villages, assemblers can be recruited through existing groups such as the village health committees, mothers groups, or traditional birth attendants (TBAs). Before recruiting assemblers from villages, however, it is important to discuss the basic delivery kit project with the village leaders.

Table 5. Purchase of Assembly Equipment and Supplies (sample only)

Equipment	Quantity	Specifications	Cost per Unit	Total Cost	Purpose
<i>Permanent Items</i>					
Scissors	3	medium-size, sharp	27	81	To cut paper, cord ties.
Knives	2	sharp, strong	15	30	To cut soap.
Wooden board	1	30 cm square	20	20	To cut soap.
Trunks	2	small	125	250	Storage for materials and finished kits.
Wooden cord-tie equipment	1	15 cm long central rod with two flat ends	15	15	To measure cord ties.
Trays	4	plastic	25	100	To hold materials such as cord ties and soap pieces.
Soap dish	1	small, plastic	5	5	To hold soap for washing hands of assemblers.
Bucket	1	sturdy plastic	80	80	To wash hands.
Mug	1	sturdy plastic	15	15	To wash hands.
Rulers	2	6 inches, plastic	3	6	To measure size of gauze and paper pieces.
Stock and distribution register	1	100 pages	20	20	For stock control.
Plastic sheet	1	plain 2.5 x 3.5 meters	40	40	To provide a clean assembly surface.
<i>Items Requiring Re-supply</i>					
Candles	24	large size	21.00/doz.	42	To seal plastic bags.
Soap	1	150 gm bar	5.75	5.75	To wash hands.
Matches	2 boxes	safety matches	0.5	1	To light candles.

To recruit assemblers, kit project managers should discuss the basic delivery kit project with potential recruits, including the project's purpose, objectives, and benefits. Managers also should discuss issues related to assembly, such as the tasks involved, time requirements, and, if appropriate, level of payment. They should select kit assemblers who are motivated, reliable, and available to commit the time



Photo: MCHIP

Handwashing is critical to quality assurance during assembly.

required for this effort. Literacy levels need not limit correct assembly. Careful training and demonstration, plus instruction cards suited to the staff's literacy level, can guide them in correct kit assembly.

Once the assemblers are selected, the kit project managers should establish written agreements or contracts with them. They should provide detailed information about their responsibilities through group meetings. This information should be provided verbally so that all assemblers, including those who are not literate, can understand.

Assemblers must be supervised carefully to reinforce hygienic practices such as hand washing and use of uniforms or aprons, and to ensure quality of the kits being assembled. Kit

project managers also should be sure to carefully coordinate and realistically schedule their time to work with assemblers for training, setting production standards, and ongoing supervision.

4



Photo: MCHIP

Delivery Kit assembler measures string for cord ties.

Voluntary Women's Groups and TBAs

Involving members of voluntary women's groups in kit assembly fosters a sense of personal involvement in the success of the basic delivery kit project. The organization and the women themselves are likely to become active promoters of the kits in their communities. Community members will increase their own and others' awareness of clean delivery practices and correct use of the basic delivery kits. TBAs also can serve in this capacity.

It is important to motivate volunteer assemblers through incentives such as recognition in the community or payment of their children's school fees.

Maternity Facility Staff

Participation of health center or maternity facility staff in basic delivery kit production reinforces the staff's motivation to promote clean delivery. If the staff members are involved in kit production and sales, they may be able to earn income that will supplement existing salaries. Participation also reinforces correct use of the kits with women attending antenatal clinics.

Commercial Groups

If a private, commercial enterprise decides to manufacture the kit, it must include the cost of establishing and supporting the kit assembly unit into its business strategy. The commercial group will need to arrange and budget for the supervisors and/or trainers as well.

Step 8: Train kit assemblers.

Before beginning the training process, kit project managers must recruit an experienced supervisor/trainer. Once selected, the supervisor/trainer should be thoroughly trained by a “master trainer” from the basic delivery kit project. The supervisor/trainer will then train a group of assemblers. Because the quality of the training will determine the quality of kit production, training should be thorough and of consistently high quality.

The trainer should plan and organize the assembly equipment, raw materials, and training aids prior to the actual training.

Methods for Training Assemblers

Trainers should use interactive, hands-on training methods that include pictorial instruction. Training sessions should be lively and involve all participants. Verbal instruction through discussion, question-and-answer sessions, demonstrations, and hands-on practice encourages active participation. Hands-on

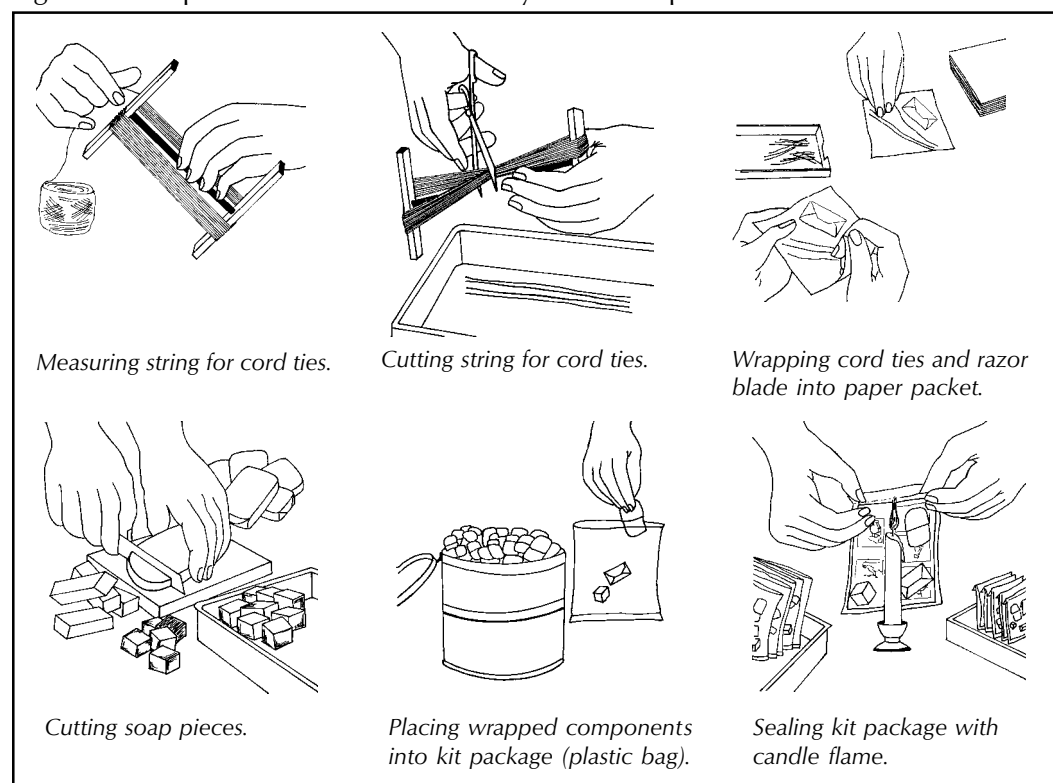
Visual Instructions for Training Kit Assemblers

In Chandigarh, India, the local group Survival for Women and Children Foundation (SWACH) conducted extensive testing of prototype clean delivery kits. The agency adapted World Health Organization (WHO) guidelines for kit production, and established a local production site. Volunteer kit assemblers were recruited from local women's groups and trained in assembly procedures. “For each step, a visual [aid] was developed, field tested, and then finalized by an artist. . . . Each visual was provided to the women volunteers in a separate plastic jacket to keep the visual protected. These visuals were numbered sequentially to help the volunteers systematically follow the steps of assembly.”³ The visual aids as well as participatory demonstration of assembly steps reinforced volunteers' expertise in assembly.

practice sessions should be repeated until assemblers perform each step with speed, skill, and precision. If assemblers are not literate or only partially literate, written information should be avoided.

Work Tool 4.5 provides a sample training curriculum and guidelines for kit assemblers.

Figure 3: Sample illustrations for assembly of kit components.



Source: WHO

Step 9: Set up the assembly site.

The room in which basic delivery kits are to be assembled should be set up to reflect the correct sequence of the assembly stations. This sequence will facilitate laying out the materials required for each assembly step, and will help assemblers become familiar with their assigned responsibilities. Having several assembly steps at each station minimizes the quantity of assembly equipment required.⁴ The assembly room should also be a clean environment, with easy access to a place for assemblers to wash their hands.

Work Tool 4.6 outlines the model steps for organizing an assembly station, and Work Tool 4.7 provides a model system for assembly stations.

Step 10: Set up the storage site.

Projects should maintain the high quality of the basic delivery kit packages and contents by storing them in a clean, dry room designed for safe storage.

Ensuring good storage conditions, including steady room temperature and protection from direct sunlight, water damage, and insects, will maintain kit quality for more than three months.

Groups of kits should be placed in large plastic bags and stored in wooden or steel chests or cupboards to further protect them from heat, moisture, pests, and other types of environmental contamination. The condition of the storage facilities should be assessed and monitored regularly to ensure that good condition of the kits is maintained.

At district hospitals or maternity facilities, the basic delivery kits can be stored in medical supply storerooms. They can then be distributed to TBAs who visit the facility for training, and to pregnant women who attend antenatal or tetanus toxoid (TT) immunization clinics. When a basic delivery kit is given to a pregnant woman, she should be advised to store it in a protected, safe place until the time of delivery.

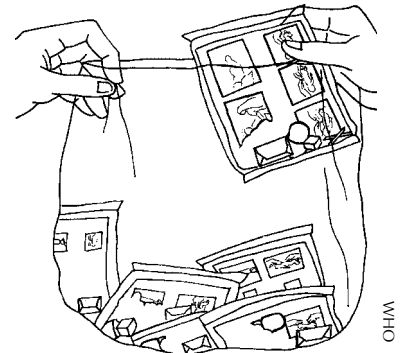
At each storeroom, supervisors should maintain a register that records the quantities of basic delivery kits received, when they were received, the number of delivery kits distributed (with relevant dates), and the current number of kits available. Kit project managers should use the register to regularly inform the supplies supervisor about the current kit supply, monthly distribution, and need for kit re-ordering at each storeroom.

Photo: MCHIP



Delivery Kit assemblers sealing plastic bags containing kit components.

4



Placing delivery kits in large plastic bag for storage.

Step 11: Develop a monitoring and quality assurance plan.

Using a description of program activities and the work plan, kit project managers should select several key indicators for monitoring kit assembly and storage. They

should decide how these indicators will be monitored (for example, by routine monthly or quarterly reports, or by regular direct observation by the supervisor). Kit project managers should develop a monitoring schedule that includes the frequency of monitoring and the persons responsible. Table 6 provides a sample plan for monitoring quality assurance at the assembly site. Random or non-scheduled monitoring should also be conducted periodically to ensure the quality of basic delivery kits. Random monitoring is an effective way to spot-check kits for poor packaging or deteriorating quality of kit components, such as rusty razor blades. Work Tool 4.8 provides a checklist for random monitoring.

Quality Assurance During Assembly in Nepal

In a 1999 field report, a consultant states: “Maternal and Child Health Products, Ltd. is committed to maintaining the high standard of quality of the Clean Home Delivery Kit by ensuring that rigorous standards of hygiene are maintained during product production. The kit is packaged inside a clean factory by trained staff. Every precaution is taken to ensure the cleanliness of the work area. Kit assembly staff must change into clean clothes reserved solely for work-time wear. Outside shoes are not permitted inside the factory. Hand washing is done any time a staff member leaves the production area. Quality control sampling of finished kits includes confirming all necessary items are included. Kits are periodically sampled from retail stores in village and urban areas to assess the quality of the enclosed items.”⁵

Table 6. Sample Plan for Monitoring Quality Assurance at the Assembly Site

Service Activity	Monitoring Activity	Frequency	Responsible Person
Kit assemblers' physical condition	Observe that assemblers: <ul style="list-style-type: none"> - maintain hygiene, - wear head scarf, - wash hands thoroughly, - wear apron. 	Daily	Production Manager
Kit assembly	Observe that: <ul style="list-style-type: none"> - cleanliness is maintained, - correct procedures are followed, - quality assurance is maintained. 	Weekly	Production Manager
Material supply	Stock review.	Monthly	Production Manager
Kit quantities	Stock review.	Monthly	Supervisor
Kit quality	Random spot-check. Quality assurance inspection.	Weekly	Production Manager
Kit storage at assembly site	Observe condition of: <ul style="list-style-type: none"> - storeroom, - storage containers for kits, - kits. 	Weekly	Supervisor
Record-keeping	Record number of kits produced, dates produced. Complete supply register at the storeroom.	Weekly	Production Manager and/or Supervisor

KIT ASSEMBLY

Work Tools

4

Adapt as needed for local circumstances.

W O R K T O O L S

4.1 SAMPLE WORK PLAN FOR ESTABLISHING A KIT ASSEMBLY SITE²

Activity	1	2	3	4	5	6	7	8	9	10	11	12
Write work plan	X											
Locate sources/determine cost of raw materials and packaging	X	X										
Determine assembly site location	X	X										
Decide number of kits needed yearly	X											
Develop a budget	X											
Identify assembly staff and supervisors		X	X									
Buy initial supplies/materials		X										
Train staff and supervisors		X	X									
Set up assembly site		X	X									
Set up storage site		X	X									
Write monitoring and QA plan			X									
Monitor kit assembly				X	X	X	X	X	X	X	X	X
Monitor kit supply and storage					X	X	X	X	X	X	X	X
Monitor kit distribution					X	X	X	X	X	X	X	X
QA/problem solving			X	X	X	X	X	X	X	X	X	X

QA = Quality assurance

W O R K T O O L S

4.2 WORKSHEET FOR ESTIMATING NUMBER OF KITS TO ASSEMBLE PER YEAR/MONTH²

Information	Equation	Calculation	Final Data
Population	n/a	n/a	
Annual birth rate	n/a	n/a	
Total births in one year	Population multiplied by birth rate		
Estimated home deliveries	Percent of home deliveries multiplied by total births		
Estimated deliveries in maternity facilities using delivery kits	Percent of deliveries in maternity centers multiplied by total births		
Total deliveries to be covered by delivery kits	Home deliveries plus maternity facility deliveries using same delivery kits		
Annual requirement of delivery kits*	Total deliveries covered plus 20 percent for wastage/loss		
Monthly requirement of delivery kits	Annual requirement divided by 12		

n/a = not applicable

*At all facilities, a buffer stock of 20 percent should be maintained so that supplies do not run out.

W O R K T O O L S

4.3 WORKSHEET FOR CALCULATING NUMBER OF DELIVERY KITS FOR DIFFERENT SITES

A kit assembly site can function efficiently only if there is enough demand for delivery kits. Each program needs to decide the annual, quarterly, and monthly production levels.

	Village Level (per ____ population)	Maternity Facility (per ____ population)	District Level (per ____ population)	Province Level (per ____ population)
Expected births per year				
Additional 20 percent for wastage				
Annual requirement				
Quarterly requirement				
Monthly requirement				

4.4 WORKSHEET FOR ESTIMATING COST OF ASSEMBLY EQUIPMENT

4

W O R K T O O L S

4.5 SAMPLE TRAINING CURRICULUM AND GUIDELINES FOR KIT ASSEMBLERS

Objective

By the end of this session, participants will be familiar with:

- current problems of infant and maternal morbidity and mortality,
- existing practices regarding home delivery,
- benefits of clean delivery practices,
- kit assemblers' roles and responsibilities,
- assembly steps,
- concept of "quality control and assurance," and
- appropriate storage for packaged kits.

Schedule

Time Total: 4.5 hours	Content	Method and Materials
1 hour	Introduction and Background <ul style="list-style-type: none"> • Introduction of assemblers • Purpose of producing a delivery kit <ul style="list-style-type: none"> - Current problems with maternal and infant mortality - WHO's Principles of Clean Delivery - Clean delivery practices/benefits • Role of assemblers • Clean assembly procedures • Contents of kit 	Register Discussion Kit contents/items
30 min.	Assembly Room Preparation <ul style="list-style-type: none"> • How to prepare assembly room • How to clean floor, door, and window • Where to set up hand-washing area • Tea and food are not allowed • Spread clean plastic sheet on room floor 	Discussion

continued on next page

Work Tool 4.5 Sample Training Curriculum and Guidelines for Kit Assemblers (continued)

Time	Content	Method and Materials
1 hour 30 min.	Assembly Procedure <ul style="list-style-type: none"> Pictorial assembly aids should be at each work station <ul style="list-style-type: none"> Material at each station should match pictorial assembly aids Measuring, cutting, and folding thread How to pack blade, thread, and plastic circle How to cut and pack soap bar Measuring plastic sheet, cutting, and folding into box size How to pack all kit contents and make proper seal Where to put pictorial instructional insert 	<p>Demonstration</p> <p>Rotate to each “station” to practice various assembly skills.</p>
30 min.	Assembly Preparation <ul style="list-style-type: none"> Personal hygiene <ul style="list-style-type: none"> Remove footwear Hand-washing techniques Techniques of wearing apron and headscarf Types of aprons Workers with respiratory infection should be excluded 	Discussion
15 min.	Maintenance of Cleanliness in Assembly Room <ul style="list-style-type: none"> How and when to dust and clean the room Movement of assemblers 	Demonstration
15 min.	Quality Control <ul style="list-style-type: none"> Selection and storage of raw materials 	Discussion
20 min. + closing	Storage <ul style="list-style-type: none"> How to store materials Where to store packed kit 	Demonstration

For more information, please refer to the assembly steps in Work Tool 4.6.

Room Preparation

The assembly room should be clean. The floors and walls should be dusted and swept. Windows should have glass, and doors should be closed during packing to minimize dust. The work surface should be scrubbed with disinfectant. The shelves of the storage cupboards should be cleaned with disinfectant. An area for washing hands should be nearby. The room should be swept and dusted, and work surfaces should be scrubbed each day of assembly. The assembly area should be well ventilated, adequately lit, cool, and free from dust at all times. Eating, smoking, and spitting must be prohibited.

Worker Preparation

Assemblers should clip and clean nails on each assembly day. Hands should be washed thoroughly with soap and water and dried on a clean towel. If they stop and do other work, assemblers should wash their hands again. Hair should be tied back. Each assembler should wear a clean apron or cloth over his/her street clothes. Outside shoes should not be worn in the assembly production room. Workers with respiratory infections should be excluded. Only authorized assembly personnel should be present when assembly is in progress.⁶

W O R K T O O L S

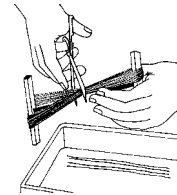
4.6 MODEL STEPS FOR ORGANIZING ASSEMBLY STATIONS

Step 1: Roll thread or string from a ball onto the wooden spool as shown in the illustration. The wooden spool has two flat ends connected by a central rod that is 15 cm long.



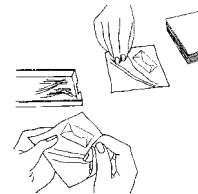
Measuring string for cord ties.

Step 2: Cut the thread/string as shown in the illustration. The length of each piece should be about 15 cm. Using this method, quickly prepare a large number of cord ties with equal lengths. Neatly lay the pieces of thread on a clean tray.



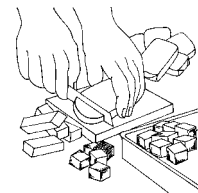
Cutting string for cord ties.

Step 3: Cut pieces of paper from the roll of paper. Prepare packets by wrapping three cord ties and one wrapped razor blade in each piece of paper. Ensure that the packets are wrapped in such a way that the razor blade and cord ties do not fall out. (Note: In some kits, thin plastic bags that can be heat-sealed are used instead of paper wrappers.)



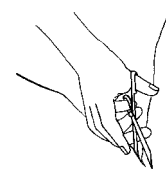
Wrapping cord ties and razor blade into paper packet.

Step 4: Cut bars of soap into small pieces that are large enough for the birth attendant to wash her hands, as well as the perineum of the mother. Put the pieces of soap in a tray.



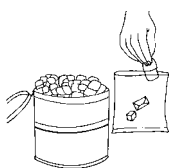
Cutting soap pieces.

Step 5: Cut sheets of plastic into squares that are one square meter. Neatly fold the sheets into small squares that will fit inside the plastic bag containing the kit contents.



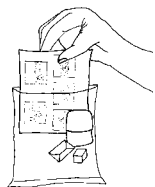
Cutting sheets of plastic into squares.

Placing wrapped components into kit package (plastic bag).



Step 6: Place a soap piece, folded plastic sheet, and the paper or plastic packet (containing the cord ties and new, packaged razor blade) into a plastic bag.

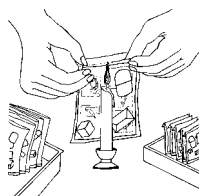
Placing the pictorial instruction sheet in a plastic bag.



Step 7: Place the pictorial instruction sheet in the plastic bag with the visuals facing outward.

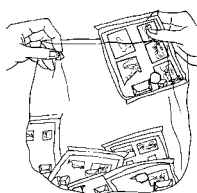
Step 8: Place the package label inside the plastic bag. (This is not necessary if the final packaging is a paper box.)

Sealing kit package with candle flame.



Step 9: Seal the plastic bag with a candle flame. Hold the two sides of the open end of the plastic bag together. At approximately two centimeters from the top of the bag, fold them over to one side to form a crease. Run this crease along the tip of the candle flame. Be careful not to let the flame touch any other part of the bag, and confirm that the bag is sealed along the full length of the crease. Place any parts of the bag that are not sealed over the candle flame and confirm the seal again. If the final packaging is a box, place the plastic bag into a pre-labeled paper box.

Placing delivery kits in large plastic bag for storage.

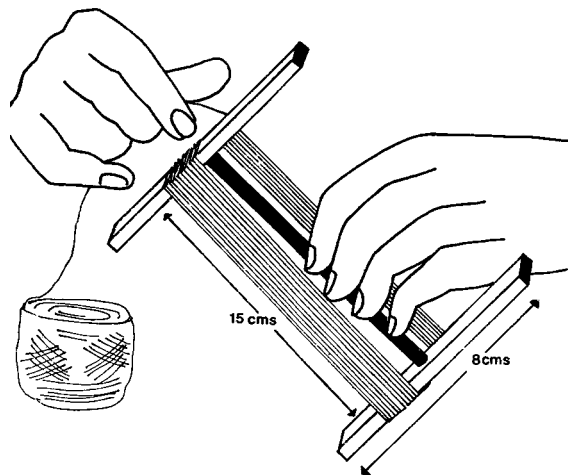


Step 10: Place several basic delivery kits in a large plastic bag, close the bag securely, and put this plastic bag in a trunk or box for storage. Store the trunk or box in the clean, dry storeroom protected from rodents and insects.²

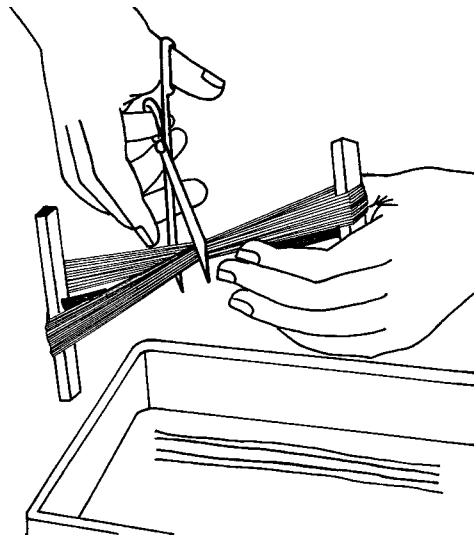
Model Steps: Visual Aids

The following visual aids can be photocopied and placed at each work station.

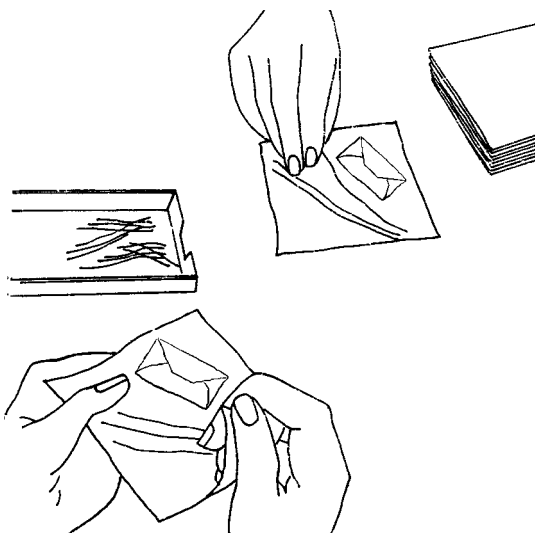
Step 1: Roll thread or string from a ball onto the wooden spool as shown in the illustration. The wooden spool has two flat ends connected by a central rod that is 15 cm long.



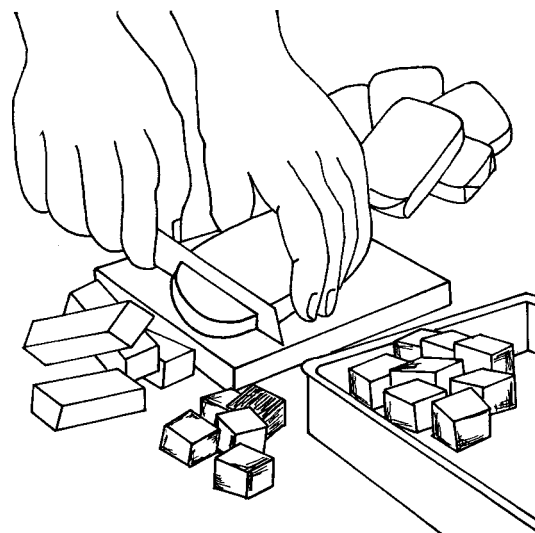
Step 2: Cut the thread/string as shown in the illustration. The length of each piece should be about 15 cm. Using this method, quickly prepare a large number of cord ties with equal lengths. Neatly lay the pieces of thread on a clean tray.



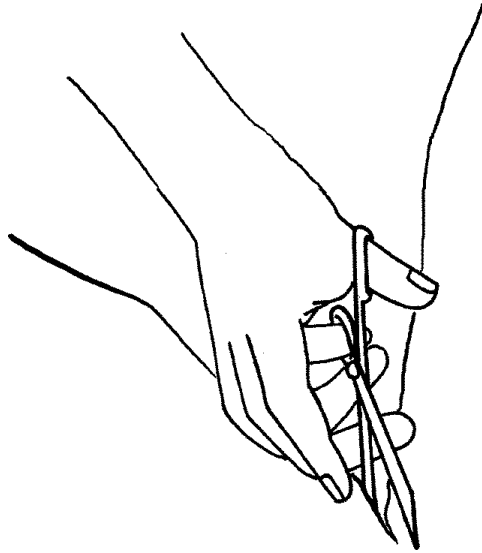
Step 3: Cut pieces of paper from the roll of paper. Prepare packets by wrapping three cord ties and one wrapped razor blade in each piece of paper. Ensure that the packets are wrapped in such a way that the razor blade and cord ties do not fall out. (Note: In some kits, thin plastic bags that can be heat-sealed are used instead of paper wrappers.)



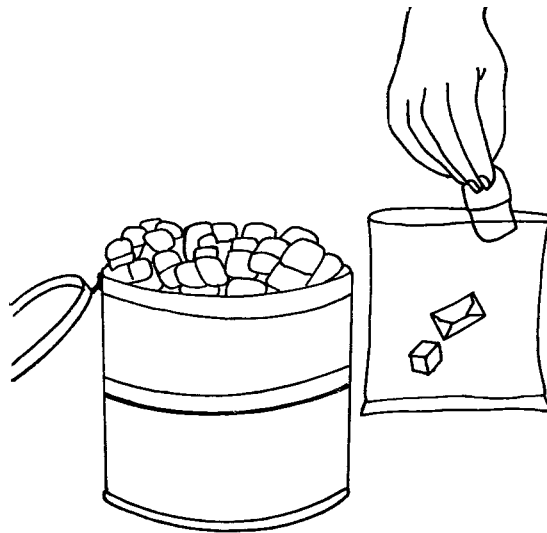
Step 4: Cut bars of soap into small pieces that are large enough for the birth attendant to wash her hands, as well as the perineum of the mother. Put the pieces of soap in a tray.



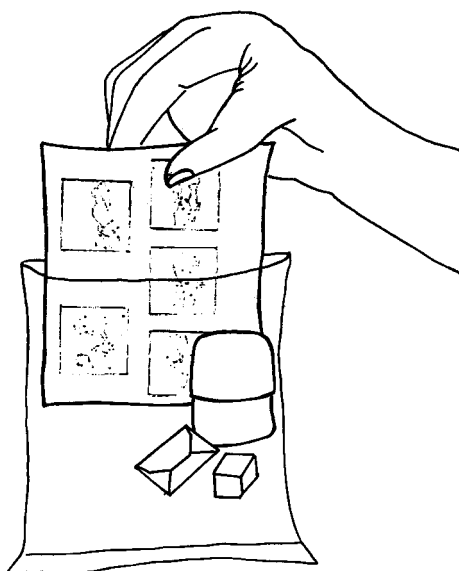
Step 5: Cut sheets of plastic into squares that are one square meter. Neatly fold the sheets into small squares that will fit inside the plastic bag containing the kit contents.



Step 6: Place a soap piece, folded plastic sheet, and the paper or plastic packet (containing the cord ties and new, packaged razor blade) into a plastic bag.

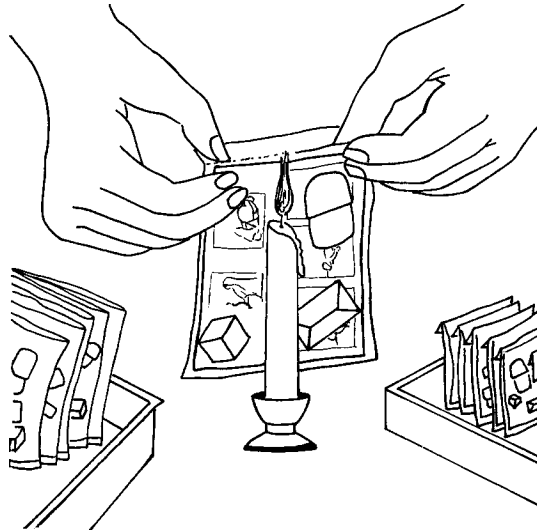


Step 7: Place the pictorial instruction sheet in the plastic bag with the visuals facing outward.

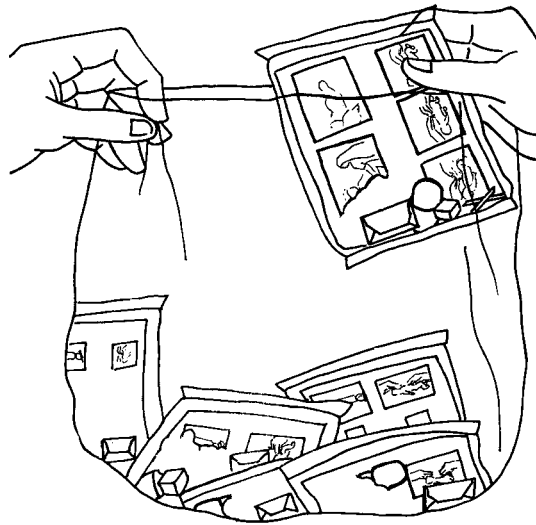


Step 8: Place the package label inside the plastic bag. (This is not necessary if the final packaging is a paper box.)

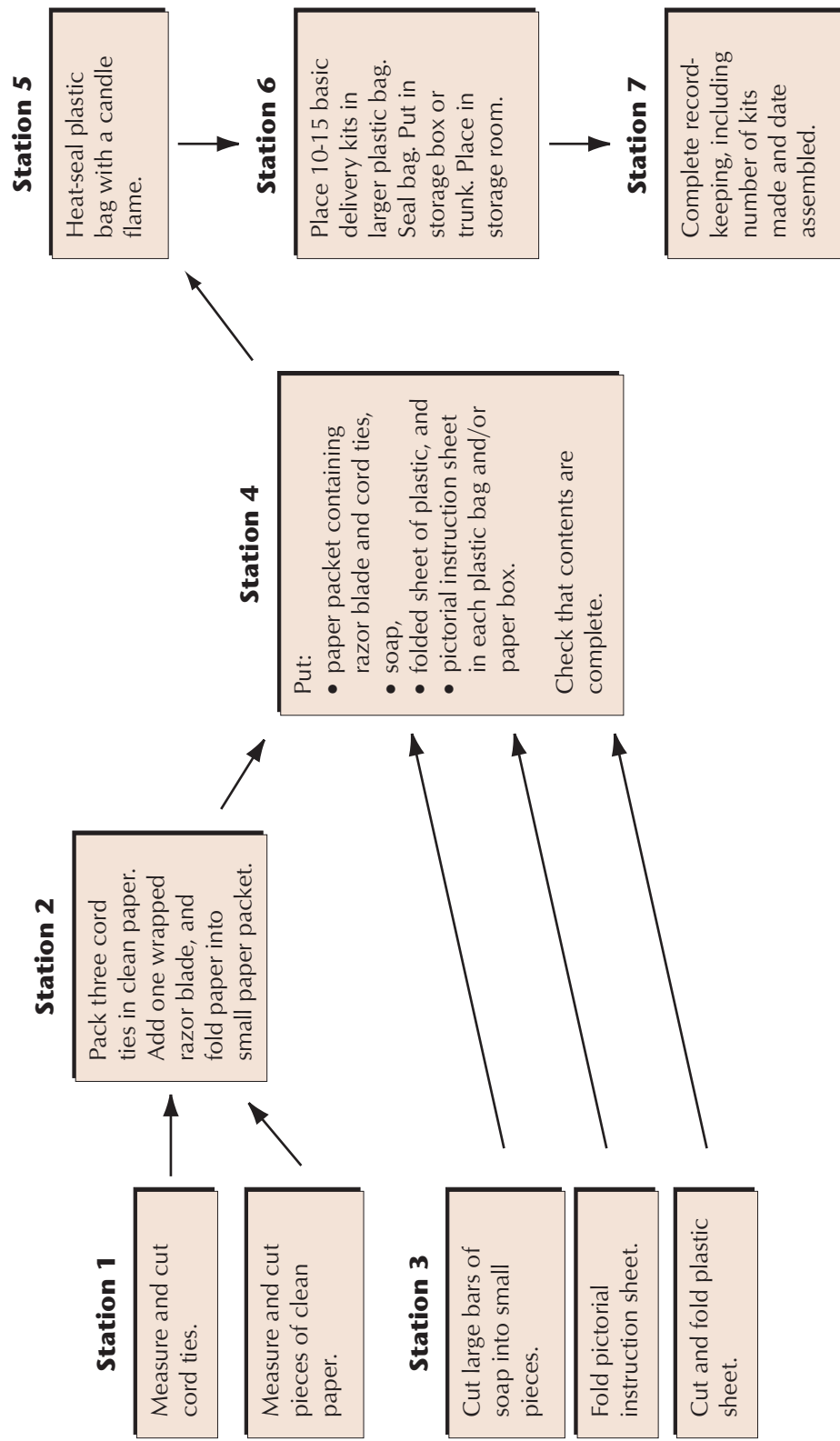
Step 9: Seal the plastic bag with a candle flame. Hold the two sides of the open end of the plastic bag together. At approximately two centimeters from the top of the bag, fold them over to one side to form a crease. Run this crease along the tip of the candle flame. Be careful not to let the flame touch any other part of the bag, and confirm that the bag is sealed along the full length of the crease. Place any parts of the bag that are not sealed over the candle flame and confirm the seal again. If the final packaging is a box, place the plastic bag into a pre-labeled paper box.



Step 10: Place several basic delivery kits in a large plastic bag, close the bag securely, and put this plastic bag in a trunk or box for storage. Store the trunk or box in the clean, dry storeroom protected from rodents and insects.²



4.7 MODEL SYSTEM—ASSEMBLY STATIONS FOR DELIVERY KITS



W O R K T O O L S

4.8 SAMPLE CHECKLIST FOR RANDOM MONITORING OF THE QUALITY OF BASIC DELIVERY KITS⁷

Item to Check	Circle One Response		
Kit	Complete	Items missing	
Razor blade	Rusted	Not rusted	Omitted
Soap piece	Intact	Disintegrated	Omitted
Cord ties	15 cm	Less than 15 cm	
Number of cord ties	3	2	Omitted
Pictorial instruction card	Correctly placed	Not correctly placed	Omitted
Plastic sheet	Folded well and included	Not folded well	Omitted
Sealing of plastic bag	Completely sealed	Not completely sealed	Omitted
Storage	No evidence of damage	Evidence of damage	

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1. Ravindran S. "Development, Use, and Health Impact of Simple Delivery Kits: A Case Study by a Grassroots Women's Organization." Rural Women's Social Education Centre (Unpublished) (May 1991).
2. World Health Organization (WHO). "Clean Delivery Techniques and Practices for Prevention of Tetanus and Sepsis: Guidelines for Establishing Disposable Delivery Kit Assembling Units." (WHO/MSM/CHD94.4) Geneva: World Health Organization (1994).
3. Survival for Women and Children Foundation. "Development, Use and Health Impact of Simple Delivery Kits in Selected Districts of India." (Unpublished) (1992).
4. WHO. "Clean Delivery Techniques and Practices for Prevention of Tetanus and Sepsis—A Guide for District Programme Managers." WHO/MSM/CHD94.2. Geneva: World Health Organization (1994).
5. Murray J. "Program in Intercultural Management," Unpublished practicum final report, PATH and Maternal and Child Health Products Ltd. (May 1999).
6. Christian Commission for Development in Bangladesh. "Operations Research: Safe Birth Kit Report." (Unpublished) (August 1990).
7. Arco ES, Kabir IA. "Needs Assessment Report: Operations Research Safe Birth Kit Development." Christian Commission for Development in Bangladesh. (Unpublished) (February 1989).

KIT DISTRIBUTION AND PROMOTION

5



Program for Appropriate Technology in Health

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SECTION 5

KIT DISTRIBUTION AND PROMOTION

SUMMARY

Section 5 discusses the distribution of basic delivery kits, including:

- effective distribution systems,
- re-supplying distributors, and
- monitoring distribution.

This section also addresses promotional activities that are essential to increasing awareness and acceptance of clean delivery practices, as well as basic delivery kits.

5.1 DISTRIBUTING BASIC DELIVERY KITS

To ensure that an adequate number of delivery kits reaches end-users, kit project managers should:

- estimate demand (see Section 4.2, Step 2, and Work Tool 4.2);
- select distributors, distribution outlets, and routes;
- distribute basic delivery kits on a regular schedule; and
- monitor distribution to determine resupply.

Effective Distribution Systems

Kit project managers should develop a distribution system that addresses the following issues:

- types and numbers of outlets and distributors;
- quantity of kits that will be supplied to each outlet and distributor;
- frequency of distribution;
- mechanisms for moving kits from the assembly unit to storerooms, and to outlets/distributors;
- potential collaboration with existing distribution mechanisms for health care supplies, such as social marketing projects;
- coordination with the other program activities (for example, kits should be supplied only after training of traditional birth attendants (TBAs) or midwives has been conducted);
- transportation systems that ensure timely and adequate supply of kits and minimize damage; and
- identification of all personnel responsible for various distribution activities.

The kit project manager should establish the distribution strategy in consultation with the groups and individuals who will be involved in kit distribution, including local TBAs, nongovernmental organization (NGO) managers, government health managers, commercial retailers, shopkeepers, village cooperatives, and religious and community leaders. Communicating with these groups will help ensure that distribution meets and maintains demand.

The kit project manager also should identify commercial or social marketing distributors. Generally, a contractual agreement is established to outline the distribution process and financial compensation. Figure 4: Model Distribution System was developed by Maternal and Child Health Products, Ltd. (MCHP) in collaboration with Contraceptive Retail Sales (CRS) in Nepal.

NGOs as Distributors

Kit project managers should contact major NGOs with strong primary health and maternal and child health (MCH) programs to determine whether they are interested in buying the basic delivery kits. NGO primary care centers that provide essential drugs and oral rehydration salts may be interested in selling the kit as a standard item.

Additionally, NGOs may have established women's groups that can be important outlets for the kits. They also may have trained outreach workers who can distribute the basic delivery kits to users in inaccessible areas. Kit project managers should send these NGOs a brief description of the basic delivery kit, suggested retail prices, a brief history of the kit's development, ordering information, and promotional materials.

EXAMPLE FROM THE FIELD: UGANDA



In a collaborative effort, USAID, the Commercial Market Strategies Project (CMS), Population Services International (PSI), and CARE International sponsor a program to socially market clean delivery kits in southwestern Uganda. The program distributes kits and trains users through CARE's network of over 300 community health workers in three districts.

Groups such as antenatal care providers, drug shop owners, and women's groups also distribute the clean delivery kits. To encourage appropriate delivery practices and

increased use of the kits, project partner agencies employ a variety of promotional activities, such as advertising and educational campaigns.

Each kit contains a clean razor blade, cord ties or clamps, a plastic sheet, soap, one pair of latex gloves, and pictorial instructions on the correct use of kit components. For more information on this project, contact the Uganda office of PSI or CARE.¹

Distribution Directly to Pregnant Women or TBAs

Basic delivery kit projects can also supply kits directly to pregnant women or TBAs. For example, kits can be sold to pregnant women when they attend antenatal clinics, when a health worker or TBA visits them at home, or by members of voluntary women's groups in the community. TBAs can carry the kits with them when they are called to attend a delivery, and pregnant women can buy the kits from village pharmacies, shopkeepers, voluntary women's groups, or other outlets.

Essential Drugs Program

National Essential Drugs Programs distribute essential drugs to NGOs and government medical stores throughout many countries. The basic delivery kit can be added to their order list or included in their basic monthly shipment of essential drugs that go to health sites. This would provide subsidized and continuous distribution.

Commercial Distribution Networks

Through commercial distribution networks, delivery kits can be distributed to small retail outlets selling a variety of essential household items such as soap, candles, and cooking oil. Large distributors may be willing to distribute the kits to retailers as a public service.

Government

In situations where NGOs develop kits in collaboration with the ministry of health (MOH), the government may be able to assist with national distribution. If the government (or MOH) purchases the basic delivery kit, it can then be distributed as samples to female health workers and TBAs during their training sessions. The government also can provide a subsidy in the form of tax-free sales, which would help maintain the low retail price of the kit to support those practices. To further promote distribution, the government can provide public service announcements on radio and television that promote clean delivery practices and use of the basic delivery kit. Please note that this activity should take place only after the

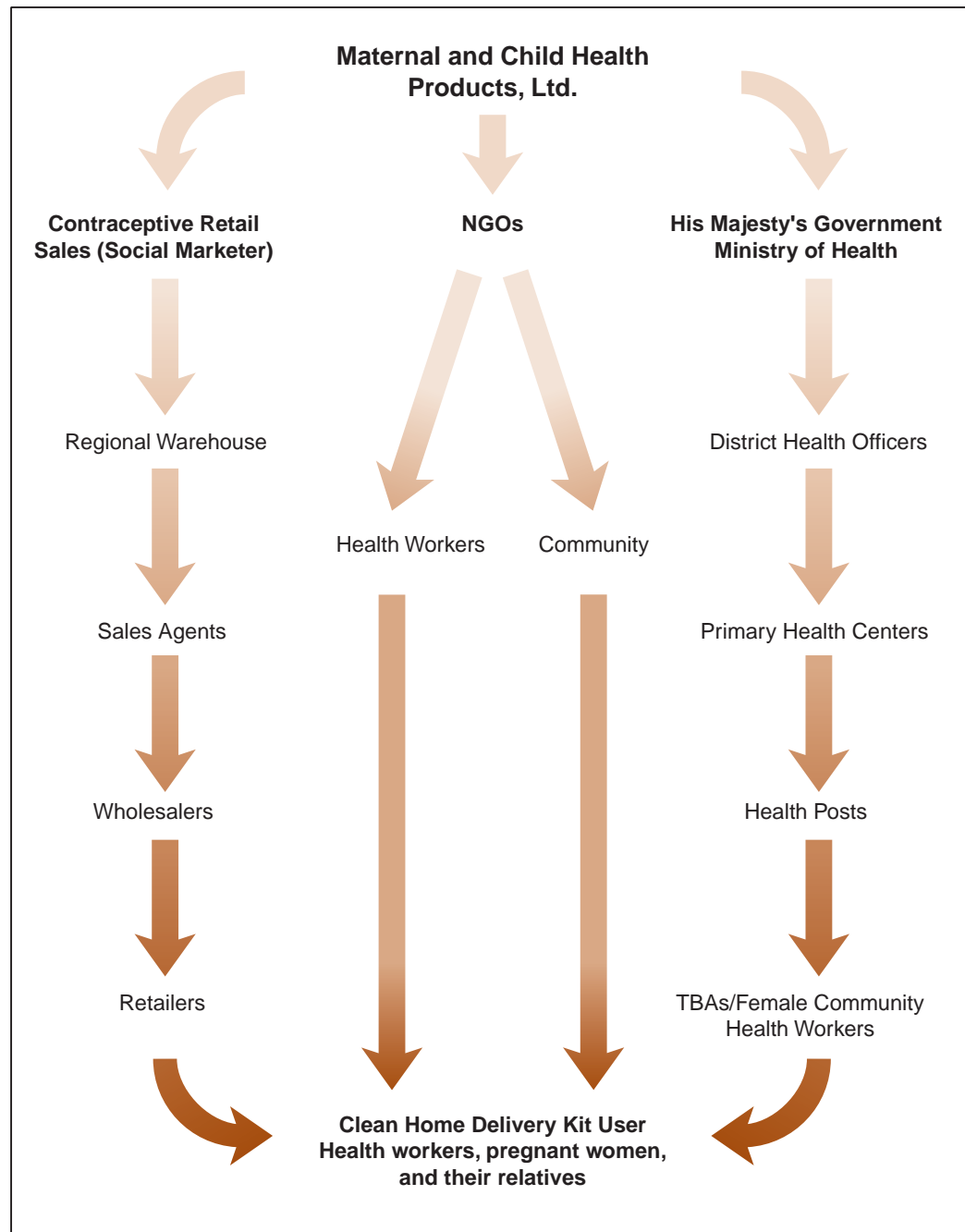
Distributors of the Home Birth Kit in Cambodia

Because the kit was intended for all levels of birth attendants, kit program managers in Cambodia felt it could be marketed commercially through pharmacies, drug shops, itinerant drug sellers, small retail shops, and stalls selling goods of all kinds. Distribution was planned through the same channels that distribute drugs and other products, with support from local social marketers such as Population Services International (PSI).²

5

distribution network has covered areas reached by the media. Figure 4 provides a model of the distribution system used by MCHP in Nepal.

Figure 4: Model Distribution System



Source: MCHP "Report of District Promotional Campaign," September 15, 1999.

Resupplying Distributors

Long-term program success relies on the ability to resupply distributors with basic delivery kits well in advance of their need for them. Effective resupply systems will prevent stock-outs at the community and retail levels. Regular distribution is important for product credibility with wholesalers, retailers, and consumers.

Methods for ensuring adequate quantities of delivery kits include:

- **Regular replacement of a fixed quantity.** Each outlet receives a fixed quantity on a regular basis (for example, ten kits every three months). This type of replacement schedule is common with commercial distributors and social marketers, who usually keep their own system for tracking quantities needed and distributed. The quantity should be based on the expected number of births in the area and the expected number of kit sales within a fixed time period.
- **Replacement of quantities used.** Kits can be replaced as they are used or sold. This method requires monitoring and may be logistically challenging.

Monitoring Distribution

Monitoring of assembly sites for control of storage quality and stock quantities was covered in Section 4. In addition to assembly-site monitoring, regular record reviews and site visits must be conducted to monitor kit distribution. This includes monitoring the number of kits at each level of the distribution system and the number and types of distribution channels. Helpful tools include checklists of the number of kits distributed by each distribution site over a specified period of time. Informal discussions with TBAs, community health workers, retailers, wholesalers, and distributors also provide information about how kit distribution systems are functioning.

Photo: JHU/CCP



Distribution of kits requires careful planning and budgeting.

A sample record form to track production and distribution is provided in Table 7. Additional information about monitoring is included in Table 8 in Section 6.

Table 7. Sample Production and Distribution Record³

Date	No. of Kits Produced	Total No. of Kits Available (No. of Kits Produced + Balance)	No. of Kits Distributed to Each Outlet*				Total No. of Kits Distributed	Balance of Kits Available	Comments
			A	B	C	D			
1/1/2000	200	200	50	0	10	50	110	85	5 damaged by rodents
3/15/2000	300	385	50	70	90	65	275	100	10 damaged by rain
5/20/2000	350	450	90	80	100	80	350	85	15 damaged by rain

*In some programs, the number of distribution outlets will vary greatly (perhaps up to 100 or more) and the number of kits distributed will be higher.

5.2 DEVELOPING A KIT PROMOTION STRATEGY

Kit project managers should develop a strategy for promoting their basic delivery kits. These promotional activities will be one component of a larger communication strategy that focuses on safe motherhood and specifically, clean delivery practice issues.

Promoting Basic Delivery Kits

The use of basic delivery kits must be actively promoted with potential users during clean delivery orientations and training with health workers, midwives, and TBAs. They should also be promoted during meetings with manufacturers, distributors, wholesalers, and retailers. It is especially important to include men as targets of promotional efforts; beyond their key role as community leaders, health decision-makers, and purchasers, many want to be involved in improving the health of women and children.

Promotional activities with community leaders and potential users will increase people's awareness of the kit and motivate them to purchase and use it. Promotional activities should be conducted in a manner that is culturally appropriate and acceptable to the users. It is important that the project staff network with NGOs

and MOH programs to expand awareness of and motivation to use the delivery kit, and to expand the marketing base.

In some countries it may be appropriate to ask the MOH to promote the delivery kit by including it on the essential drugs list or by placing the MOH's seal of approval on the kit package.

Developing Promotional Materials

A basic delivery kit project's promotional materials can include a range of items, depending on the target audience. For example, audio-visual materials are more appropriate for low-literate mothers and TBAs, while shop owners may be more interested in using materials that can be displayed in their store. Kit project managers should base the design of their promotional materials on the needs-assessment data. Promotional materials may include:

- banners,
- kit logo printed on items,
- point-of-purchase items such as danglers,
- leaflets,
- posters promoting clean delivery practices,
- key chains,
- stickers, and
- TBA canvas bags with kit logo and clean delivery messages.

Work Tool 5.1 describes sample materials from a basic delivery kit promotional campaign in Nepal, and Work Tool 5.2 provides a work plan for promotional materials development.

Pretesting

The materials must be pretested with the target audiences such as vendors and users. If the materials are unattractive, inappropriate, or unacceptable to their target

Promoting the Kit in an Indian Community

In one district in India, several strategies were implemented to increase community demand for their delivery kits:

- Illustrated flip books and kit samples were provided to local health administrative staff, women and child welfare officers, supervisory staff, and health volunteers to increase their awareness.
- Kits were demonstrated to village leaders to encourage their promotion and use in the villages.
- Children's fairs were organized where kits were displayed and promoted. One type of fair took place during weekly immunization sessions in the villages. The kits' benefits were explained to mothers, and they were encouraged to seek the services of a trained TBA for delivery.⁴



Photo: PATH

Pretesting the instructional insert with non-literate woman.

Clean Delivery Kit Promotional Idea

MCHP constructed a large wooden replica of the clean home delivery kit. The wooden “delivery kit” was placed on top of a vehicle equipped with

loudspeakers, that went to weekend bazaars to promote the kit. The bright red color and huge size of the “kit” attracted

crowds of curious people who were then exposed to messages about the importance of clean delivery practices.⁵



audiences, they could be a waste of valuable resources. Pretesting the materials, therefore, is critical.

Work Tool 5.3 provides pretest questions for promotional materials and kit pictorial instructions.

Key Messages

Kit project managers should identify appropriate messages about the benefits of clean delivery and the basic delivery kit. These messages can be determined through formative research conducted during the needs assessment.

Messages must be designed to reach a range of audiences. Promotional materials targeted to different audiences may have distinct messages. For example, a message for women delivering alone at home might emphasize ease and convenience, whereas, a flyer for a male purchaser may emphasize the importance of buying the kit several weeks before the delivery date.

Key messages may include:

- Basic delivery kits promote healthier deliveries and infants.
- Basic delivery kits are easy and convenient.
- A clean delivery is a healthier delivery.
- All items necessary for clean delivery are in the kit; there is no need to search for supplies.
- Buy the kit several weeks before delivery, in case the baby arrives early.
- Basic delivery kits help protect against infections.

Communication Channels

Channels for communicating information about the basic delivery kit vary according to the audience. They may include:

- demonstrations of the kit during meetings with women's groups;
- short discussions of clean delivery practices during community gatherings;
- posters, kit samples, and short discussions about the kit during tetanus toxoid (TT) immunization campaigns or immunization days;
- promotion through songs or poetry at community gatherings, on the radio, and over loudspeakers;
- storytelling, dances, or drum groups at community events or village performances;
- displaying posters on buses, at health centers, and near areas where community members congregate (such as wells, shops, and bus shelters);
- health education talks with mothers during antenatal visits;
- radio spots, or broadcasting songs and interviews with authority figures and satisfied users;
- wall paintings; and
- posters in shops and community centers.

Depending on the skills of the staff, it may be necessary to hire consultants with expertise in the development of communication activities.

Promotion by Interested Groups

One of the most effective means of promoting delivery kits is through interpersonal communication channels. This requires the involvement of all interested groups and collaborators.

Photo: JHU/CCP



Puppet shows, such as this one in India, are a major promotional activity in some cultures.

Photo: MCHIP



Promoting the Clean Home Delivery Kit through wall paintings in Nepal.

Promotion of the Clean Home Delivery Kit Through the Use of Loudspeakers (Miking) in Weekend Markets in Rupandehi, Nepal

A PATH consultant observed an effective use of kit promotion in Nepal, reporting that “the Field Coordinator located shops in the bazaar that rented miking equipment. The miking equipment consisted of a car battery, large speaker cone, amplifier, and microphone, and could be rented cheaply. The storeowner directed us to a boy who could do good miking—he had recently done miking messages for politicians during political rallies . . . it was important to use an older female voice to project the message. The District Health Officer was able to provide us with one of his staff, a nurse who proved to be a good miker. The two mikers would take turns broadcasting messages such as: “Infant deaths from tetanus and sepsis can be decreased by practicing clean delivery techniques and using the Clean Home Delivery Kit.”⁵

- **TBAs** are likely to promote the kits if they are convinced of their benefits and are trained in their use. Their training and endorsement of the kits will enhance their status in the community, possibly leading to increased income or greater prestige. TBAs can become active promoters, suppliers, and users of kits. In addition, by providing TBAs with a limited supply of delivery kits when they have successfully completed their training, MCH program managers can increase TBAs’ skills and confidence, as well as the community’s faith in their services.
- **Members of community associations** such as voluntary women’s groups can promote the use of basic delivery kits and develop a sense of achievement for the work they have performed for their community.
- **Medical providers** should be informed directly about the benefits of basic delivery kits. They may be unaware of related national policies and strategies. When convinced of the benefits of the basic delivery kit, medical providers may be more likely to promote it to other health workers.
- **Health workers** such as midwives should discuss how the basic delivery kit will improve the integration of TBAs into the health care system.
- **NGOs** should encourage community discussions on the role of clean delivery practices, emergency obstetric activities, and TT immunization in protecting birth outcomes.⁶

Community Meetings

Whenever possible, kit project managers should identify and involve community groups and leaders in their basic delivery kit project. Community meetings organized by midwives or TBAs offer an excellent opportunity to encourage the

participation of voluntary women's groups, shopkeepers, and village leaders. Community leaders who learn about the benefits of basic delivery kits and the simplicity of their use will likely be willing to promote them.

Discussion of the basic delivery kits at these meetings should include a demonstration of kit use. Kit project managers should provide refreshments or similar incentives. They should be sure to obtain feedback from the participants and discuss how the basic delivery kit may alleviate some common birth-related health problems.

Photo: MCHP



Orienting TBAs to Clean Home Delivery Kits in Nepal.

Mass Media

With changes in media technology, most national or large delivery kit projects should seriously consider developing mass media interventions. Both radio and television are available to many thousands of villagers and peri-urban populations. The messages broadcast through both media are extremely effective in raising awareness of the delivery problems (such as tetanus and cord infection), clean delivery practices, and the availability of basic delivery kits. Beyond awareness raising, the media can help direct people on how to access and, sometimes, how to correctly use the delivery kits.

In many countries, the government, often in collaboration with the United Nations Children's Fund (UNICEF) and other United Nations (UN) agencies, subsidizes both radio and television programs and public service announcements containing socially beneficial messages. UNICEF offices often have a specialized staff skilled in creating radio and television programs that integrate key messages on reproductive health. The involvement of the government and UN agencies in promoting delivery kits is an important form of subsidy.

While mass media is extremely effective in raising awareness and motivating people to change behavior, it must be carefully integrated with and reinforced by community discussions and interpersonal communication techniques. The cost of media campaigns must be carefully weighed against other less expensive communication channels.

Work Tool 5.4 provides a sample marketing budget, and Work Tool 5.5 provides a sample radio broadcast schedule.

Providing Incentives

In subsidized basic delivery kit projects, kit project managers may offer small incentives to people who distribute the kits to pregnant women and TBAs. The incentives should be consistent with national policies. If direct financial rewards are not feasible, the kit project manager may develop other ways of recognizing the TBAs, such as certificates of appreciation.

With partially subsidized or commercial kit projects, kit project managers may wish to offer a promotional package to NGOs and/or retailers. The package could contain promotional items including posters, flyers, and danglers that would serve to promote the kit and save the NGOs and retailers the expense of doing it themselves.

Ensuring Satisfaction

Client satisfaction is extremely important to promoting the kit. Clients who are pleased with their use of the delivery kit will encourage others to use it.

The ability to ensure satisfaction depends on numerous factors, including:

- affordability and ease of obtaining the kit,
- ensuring a regular supply of kits,
- appropriate use of the kit,
- quality of the kit components,
- association between healthy delivery and the use of the kit, and
- willingness of the user to recommend the kit to others and/or to use it in future deliveries.

Client satisfaction can be achieved by:

- informing users how and where kits can be obtained,
- training TBAs in the correct use of delivery kits, and



Photo: JHU/CCP

Interpersonal communication is one of the most effective kit promotional activities.

- monitoring and maintaining quality control during the assembly and storage of delivery kits.

Ensuring and maintaining client satisfaction is essential to the project's long-term success.

Promoting Behavior Change

In conjunction with promotion of the basic delivery kit, it is critical that kit project managers work to promote behavior change with respect to clean delivery issues. Promotional activities should include:

- working with women's groups to inform and promote the importance of neonatal and postpartum care;
- targeting men to promote care and nurturing of pregnant women and new mothers; and
- promoting information, education, and communication (IEC) campaigns aimed at young women, their families, and communities.

These campaigns should promote essential safe motherhood messages including birth preparedness planning, postpartum care for mothers and neonates, knowledge of serious complications of pregnancy, childbirth and the postpartum period, and immediate and exclusive breastfeeding. Once community groups outside of the basic delivery kit project consider these behaviors important, there is a much better chance of them becoming social norms, thus, sustaining behavior.⁷

The communication strategy for basic delivery kit projects should focus on behavior change models that are appropriate for the community. Models that have originated in the field of social psychology are particularly useful, such as the Health Belief Model (HBM), the Theory of Reasoned Action (TRA), and the Social Learning Theory.⁸ These behavior change models emphasize individual and community involvement in the negotiation of healthy or safe behavior. Behavior change models help to explain how individuals analyze the costs and benefits of their actions and their perceived ability to change. They recognize the relationship between attitudes, beliefs, intentions, and behaviors, and the role of culture in affecting change.

The main purpose of behavior change communication is to support people to adopt healthier practices by providing encouragement, information, and skills development. The desired behavior change should be feasible—a simple behavior (e.g., washing hands during delivery or using a clean razor blade) that is reinforced through the influence of community leaders and key informants such as doctors, TBAs, and midwives.

KIT DISTRIBUTION AND PROMOTION **Work Tools**

Adapt as needed for local circumstances.

5

5.1 SAMPLE BASIC DELIVERY KIT PROMOTIONAL CAMPAIGN IN NEPAL

Promotional Campaign Activities

Preparation of Promotional Materials

To promote the Clean Home Delivery Kit (CHDK) within the community:

- Banners were constructed with messages promoting the CHDK and clean delivery.
- A large wooden model of the CHDK box was constructed to attract attention during miking (using loudspeakers) efforts in weekend bazaars.
- Promotional messages were created for banners, miking, TBA bags, female community health volunteer bags, radio spots, and wall paintings. These messages were pre-tested with local people and adapted accordingly.
- Four radio spots were designed for regional broadcast. A member of the UNICEF-sponsored popular television series “Devi” was contracted to design and produce these radio spots. Preliminary spots were recorded and then pretested with local men and women. Adaptations were incorporated and aired in the western region first, during the time of the first district promotion (Rupandehi), to gauge local reaction before broadcasting in all five regions of the country.
- Plastic packets with a photo of the kit, kit materials, history of the CHDK, statistics for national and district maternal mortality, and use of CHDK were made. Fifty of these packets were created for Village District Committee chairmen and other officials.

Preparation of Training Materials

To promote the CHDK with training participants:

- Plastic bags were designed and ordered from a local plastic producer. These bags for the female community health volunteers were imprinted with the CHDK logo and the message “Let’s work together to protect the lives of mother and baby.” These bags were given to the targeted 900 female community health volunteers, complete with one CHDK and IEC materials discussed during training.
- Cloth bags were designed and ordered from a local bag maker. These bags for the TBAs were imprinted with the CHDK logo and the message “Protect mother and baby from tetanus and cord infection.” The bags, each containing five CHDKs, two posters, and other IEC materials, were given to 500 TBAs at the completion of their refresher training.
- Training syllabi for the female community health volunteers and TBAs were developed. Information included an overview of clean delivery practices and correct use of the CHDK.
- For the training of TBAs and female community health volunteers, 2,750 CHDKs were manufactured, and training, promotional, and IEC materials were cataloged and assembled.
- District Health Office staff were contacted to arrange for convenient dates and sites for training TBAs and female community health volunteers.
- Obtaining a letter from His Majesty’s Government’s Ministry of Health was essential to obtaining support from local government staff. Obtaining this letter took much longer than was anticipated, due to inaccessibility of the Divisional Chief.⁹

W O R K T O O L S

5.2 PROMOTIONAL MATERIALS DEVELOPMENT WORK PLAN

Activity		Month	1	2	3	4	5	6	7	8	9	10
I.	Review data collected during needs assessment		X									
II.	Draft materials											
	A. Design messages			X								
	B. Develop storyboard			X								
	C. Work with artist on illustrations			X								
	D. Draft the text			X								
III.	Pretest and revise materials											
	A. Pretest and revise			X	X	X						
	B. Preview by interested persons and organizations					X						
	C. Revise and pretest further until materials are satisfactory					X	X					
IV.	Final approval by groups interested in using materials							X				
V.	Print							X	X			
VI.	Train health workers									X	X	
VII.	Distribution										X	X
VIII.	Evaluation										X	X

5.3 SAMPLE PRETEST QUESTIONS FOR PROMOTIONAL MATERIALS

When pretesting promotional materials, kit project managers should ask potential users probing questions such as:

1. What information is this page trying to convey?
2. What does the text mean in your own words?
3. If there is a picture, what does the picture show? Is it telling you to do anything or to take any action? If yes, what?
4. Do the words match the picture on the page? Why, or why not?
5. What do you like/dislike about this page?
6. Are there any words in the text you do not understand? Which ones? (If so, explain the meaning, and ask respondents to suggest other words that can be used to convey that meaning.)
7. Are there any words that you think others may have trouble reading or understanding? (Again, ask for alternatives.)
8. Are there sentences or ideas that are not clear? (If so, have respondents show you what they are. After explaining the intended message, ask the group to discuss better ways to convey the idea.)
9. Is there anything you like/dislike about this pictorial instruction (or kit package, flyer, poster, radio message, etc.)—use of colors, kinds of people represented, or choice of women represented?
10. We want the materials to be as good as possible and easily understood by others. How can we improve the pictures?
11. What other suggestions do you have for improving this material—pictures, words, or both?¹⁰

5.4 SAMPLE MARKETING BUDGET FOR CLEAN HOME DELIVERY KIT/NEPAL

	Rupees	US\$
Creative Development and Design		
Design and development of advertising and merchandising materials listed below	670,000	10,000
Subtotal Creative Development and Design	670,000	10,000
Advertising		
Radio advertising production (3 spots @ 22,000/each)	66,000	985
Radio advertising (500 30-second spots @ 1,000/spot and 400 60-second spots @ 1,500/spot on "A" Time—National Radio)	1,100,000	16,418
Outdoor boardings (14 billboards @ 40,000/each)	560,000	8,358
Outdoor road signs (200 @ 1,500/each)	300,000	4,478
Wall paintings (100 @ 2,000/each)	200,000	2,985
Subtotal Advertising	2,226,000	33,224
Merchandising		
Shop perimeter/wall paintings (100 outlets @ 1,500/each)	150,000	2,239
Metal flange signs (5,000 @ 35/each)	175,000	2,612
Pillar posters (10,000 @ 12/each)	120,000	1,791
Stickers (3,000 @ 12/each)	36,000	537
Danglers (10,000 @ 12/each)	120,000	1,791
Bunting—fabric (1,000 @ 150/each)	150,000	2,239
Consumer brochures (20,000 @ 10/each)	200,000	2,985
Jute bags (5,000 @ 28/each)	140,000	2,090
Subtotal Merchandising	1,091,000	16,284
Consumer and Trade Promotions		
<i>J&J baby oil co-promotion</i>		
Baby oil (15,000 baby oil products @ 38/each)	570,000	8,507
Tactical radio ad production (1 spot @ 22,000/each)	22,000	328
Tactical radio ads (250 30-second spots @ 1,000/spot)	250,000	3,731
Tactical posters (3,000 posters @ 20/each)	60,000	896

Work Tool 5.4 Sample Marketing Budget for Clean Home Delivery Kit/ Nepal (continued)

<i>Community Promotion</i>		
Vehicle—4WD w/video and sound PA equipment	1,500,000	22,388
Vehicle running costs (3,000kms/month @ NRs 7/km x 12 months)	252,000	3,761
Driver (Salary: 6,000/month x 14 months)	84,000	1,254
Promotional team (2 team leaders @ 9,500/month x 14 months and 2 team members @ 6,000/month x 14 months)	434,000	6,478
Promotional team/driver per diem (5 persons x 264 days @ 515/day)	679,800	10,146
Drama development (9 regional dramatic plays @ 30,000/each)	270,000	4,030
Actors (1 coordinator @ 700/day and 4 actors @ 600/day x 264 days)	818,400	12,215
Actors' per diem (5 persons @ 300/day x 264/days)	396,000	5,910
Subtotal Consumer/Trade Promotion	5,336,200	79,644
Public Relations		
Educational video	637,071	9,509
National Clean Delivery Day (1 event @ 120,000/each)	120,000	1,791
Subtotal Public Relations	757,071	11,300
Research		
Advertising concept/creative test	200,000	2,985
Retail audit baseline and monthly tracks	1,450,000	21,642
KAP study	650,000	9,701
Subtotal Research	2,300,000	34,328
Training		
Sales force training/Training of Trainers (TOT)	115,000	1,716
Retailer training (25 @ 16,225/each)	405,625	6,054
NGO training (20 sessions @ 16,225/each)	324,500	4,843
Subtotal Training	845,125	12,613
TOTAL CHDK MARKETING BUDGET 1998-9	13,225,396	197,393

5.5 SAMPLE RADIO BROADCAST SCHEDULE FOR CHDK IN NEPAL

Media: Radio Regional Transmission
Product: Clean Home Delivery Kit (CHDK)
Period: 2nd month (December 1997)

STATION **Surketh**

Program	Time	Category	Duration	Rate in Nepalese Rupees (NRs)		Spots/day	Total spots per month	Amount in NRs
Health & Sanitation, Ethnic Language programming, Ethnic/mixed songs	9:30 to 11:30 am	Sun to Fri	30 seconds		300	1	30	9,000

STATION **Pokhara**

Program	Time	Category	Duration	Rate NRs	Spots/day	Total spots per month	Amount in NR
Health & Sanitation, Ethnic language programming, Ethnic/mixed songs	9:30 to 11:30 am	Sun to Fri	30 seconds	300	1	30	9,000

STATION **Dipyal**

Program	Time	Category	Duration	Rate NRs	Spots/day	Total spots per month	Amount in NR
Ethnic songs, Ethnic language programming, Requested Programming	9:30 to 11:30 am	Sun to Fri	30 seconds	85	1	30	2,550

STATION **Dhankuta**

Program	Time	Category	Duration	Rate NRs	Spots/day	Total spots per month	Amount in NR
Local news/Devep. Prg., Ethnic & requested songs, Local news	9:30 to 11:30 am	Sun to Fri	30 seconds	300	1	30	9,000

Developed by Contraceptive Retail Sales

Total NRs: 29,550

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SUSTAINING AND EVALUATING BASIC DELIVERY KIT PROJECTS

6

path

Program for Appropriate Technology in Health

www.path.org

SECTION 6

SUSTAINING AND EVALUATING BASIC DELIVERY KIT PROJECTS

SUMMARY

Section 6 provides details on sustaining and evaluating basic delivery kit projects. Issues explored include:

- cost-effective production and distribution,
- balance between profit and an affordable price,
- methods of subsidizing kit projects,
- program supervision and training, and
- methods of monitoring and evaluation.

6.1 SUSTAINING BASIC DELIVERY KIT PROJECTS

One of the greatest challenges facing partially subsidized and commercial delivery kit projects is achieving and maintaining sustainability. Partially subsidized basic delivery kit projects that are able to recover their production and distribution costs will reduce their dependence on donor funds and avoid burdening government services. Commercial delivery kit projects that are innovative and economical will be better able to generate adequate profits that will sustain the program.

Cost-effective Production and Good Distribution: Keys to Sustainability

To maintain self-sustaining production processes in large projects, basic delivery kits must be produced in very large quantities. This requires efficient production, large distribution networks that reach remote areas, and a high number of retailers who are willing to stock and promote the kits. Retailers who have minimal shelf and storage space for the kits may need reassurance of a brisk product turnover and reasonable profit. Similarly, basic delivery kits face strong competition from common household items stored in retail shops and distributors' trucks. Profit also may be a consideration for distributors, who work on commission; the amount of commission they can earn may directly affect their motivation to get a specific product into stores.

Kit project managers should base distribution and marketing plans for basic delivery kits on cost estimates that take into account the realities of the marketplace and the need for efficient, reliable distribution systems.

Balancing Profit and Affordable Pricing

Typically, commercial basic delivery kit projects earn profits that are too low (i.e., *small profit margins*) to sustain their programs over a long period of time. Basic delivery kit projects must find a suitable balance between profit, accessibility, and an affordable price (which will affect demand). Kits must be priced at a level that generates sufficient profit for the project, while at the same time being affordable to people with limited resources.

Distribution Costs

While Contraceptive Retail Sales (CRS), a social marketing agency in Nepal, does distribute the kit into the marketplace, the cost of distribution is high. Distribution costs add three to five rupees—up to one third of the production cost—to the total cost of the kit. The distribution cost represents transportation costs as well as incentives for the CRS sales agents and drivers. The kit competes with family planning products and oral rehydration solution for space in distribution trucks and warehouses, retail space in small shops, and limited household income that women and men may have available for health care products and services.¹

Subsidizing Delivery Kits

Because most ministry of health (MOH) programs have limited funds, it is unrealistic to expect them to be the sole supporters of subsidized basic delivery kits. In some cases, nongovernmental organizations (NGOs) and the MOH may be able to integrate components of the basic delivery kit project into related projects. It may be possible, for example, to integrate training, supply logistics, or monitoring and evaluation into existing safe motherhood, maternal and child health (MCH), or immunization programs.

In addition, basic delivery kits can be partially supported through:

- Selling the delivery kit at an affordable cost. This may enhance its value in the community and possibly increase demand. While the basic delivery kit earns no net profit, the income generated by kit sales replaces some of the cost (*cost recovery*) of assembling, storing, promoting, and distributing the kit. It still may be necessary to subsidize staff salaries or training efforts. This is a real concern and must be carefully considered.
- Developing other MCH products that are produced and sold at a greater profit than the basic delivery kit (for example, training aids for NGOs). These profits can then be used by the NGO to help subsidize manufacturing and distribution of basic delivery kits.
- Motivating retail outlets to sell the basic delivery kits on a nonprofit basis as a social contribution to the community.
- Selling the kits at wholesale prices to traditional birth attendants (TBAs), shopkeepers, or other groups; these groups can then sell the kits to pregnant women for a small profit. Alternatively, health department staff can supply the delivery kits at no cost to the various outlets, who in turn can sell them for a small profit, reimburse the health department for the number of kits sold, and keep any remaining profit for themselves. Also, the kit can be supplied to TBAs at a reduced price, and the TBAs can then charge the family a fee for the kit used during the delivery.
- Adding the basic delivery kit to the Essential Drugs List of the MOH. The kits can be distributed free of charge by the government to the government-operated medical stores and sold along with other essential medications. This also lends the kit credibility that will contribute to its sustainability.²

EXAMPLE FROM THE FIELD: RWANDA

The International Rescue Committee (IRC) sponsors a program to provide pregnant women and TBAs in Rwanda with survival kits. Four types of kits are available—a Basic Newborn Kit, a Delivery Suturing Kit, an Obstetrical Delivery Kit, and a Basic Health Emergency Kit. The Basic Newborn Kit provides materials to help ensure a clean birth in the home. The other three kits provide necessary supplies to health centers.

IRC supports subsidized distribution of the kits by soliciting donations through NetAid's website (www.netaid.org). These donations allow the kits to be sold to expectant mothers

for US\$0.75, which promotes sustainability by regenerating funds to pay for assembly (US\$0.25) and purchase of raw materials (US\$0.50). The objective of the fund is to teach birth attendants to manage the income and expense of making the kits. The price of kits will eventually increase as women realize their value, establishing a locally sustainable fund to ensure continued supplies for the kits when the donations system comes to an end. More than 16,000 kits have been donated through NetAid's website.³



6.2 PROJECT SUPERVISION

A sustainable basic delivery kit project requires consistent, supportive supervision. While issues that require improvement will become apparent over time, a supervision plan is required initially to ensure appropriate project implementation. The plan should indicate (1) the personnel responsible for supervision, and (2) the different levels of supervision needed, such as supervision of the training programs for TBAs or assembly staff.

Supervisors are responsible for:

- monitoring the project activities,
- problem-solving,
- motivating health staff and TBAs to promote clean delivery by providing feedback and suggestions for improvement, and
- following up on actions required to ensure the success of the project.

Supervising TBAs

Because project supervisors may not be able to observe the actual use of basic delivery kits, monitoring exercises can be conducted to ensure that TBAs are using the basic delivery kits correctly. For example, based on a supervising plan, each TBA participating in the basic delivery kit project can be asked to demonstrate how she has used the kit and what procedures she has used to ensure clean delivery; she can demonstrate her skills on a doll or model that includes an umbilical cord and placenta. The supervisor should carefully observe the procedure, congratulate the TBA for correct procedures, and, if any mistakes are made, suggest the correct procedure in a supportive, nonjudgmental manner. If possible, the supervisor should have the TBA practice the revised/correct procedure.

Supervising Assemblers

Supervising and monitoring kit assembly is crucial to meeting consistent production numbers and maintaining quality assurance. Supervision of kit assembly units and workers largely consists of overseeing smooth operations and problem-solving as needed. Supervisors should review records regularly to determine the quantity of kits produced and stored. Supervisors also should regularly conduct hands-on inspections of the quality of kits. If the quality is poor, the procedures for correcting the problem need to be discussed, demonstrated, and practiced.

Supportive Supervision Reflects Health Program Priorities

Following a 1992 program supported by the World Health Organization (WHO), the Survival for Women and Children (SWACH) Foundation in India reported that a major deficiency in training of TBAs and Female Multipurpose Health Workers was the lack of follow-up interaction or supportive supervision. The importance of the [kit] did not produce . . . enthusiasm, because this was not considered a priority health program nor a part of the existing health system.⁵

Supportive Supervision

Overall, supervision should be supportive and oriented toward problem solving. Supervisors should be trained and provided with monitoring checklists that identify the major tasks required for the basic delivery kit assembly, storage, distribution, and use. These practices should be built into the project so that supervision becomes professional, consistent, and institutionalized. Supervision, like other activities, can be integrated with activities related to safe motherhood, MCH, and immunization programs.⁴

On-the-spot Training

Supervisors' monitoring and supervising system should include on-the-spot training that corrects any mistakes in the assembly or use of the delivery kits. On-the-spot training is best performed through a demonstration or "hands-on" practice.

6.3 MONITORING AND EVALUATION

Monitoring

It is not necessary to establish a new, separate system to monitor the basic delivery kit project. Instead, the MCH program manager should devise simple, practical reporting tools that can be integrated into the existing monitoring and reporting system.

After key issues such as project objectives, staff responsibilities, activities, and deadlines have been clearly established, the kit project manager should finalize the monitoring plan. The plan should be regularly used to ensure that activities are being completed according to the project timeline and quality assurance requirements. It is critical to decide who will perform the monitoring, which activities will be monitored, and how, when, and where the activities will be monitored.

The objective of monitoring activities is to identify problems early so they can be solved as soon as possible. Because it is impossible to monitor every activity and task, kit project managers should prioritize the activities that are most important to the success of the project. Monitoring methods include:

- review of records (of kits assembled in a week, number of kits in storerooms, and number of kits distributed);
- observations (of kit quality, condition, and use by TBAs); and
- group discussions with TBAs (regarding their awareness of and attitudes toward the kits) and with women who have used the kit (to determine their access to, opinion of, and suggestions for improving the kit).

Table 8 provides a list of monitoring activities for a basic delivery kit project.

Table 8. Monitoring a Basic Delivery Kit Project⁴

Activity	What to Monitor	Whom to Monitor	How to Monitor
Training	<ul style="list-style-type: none"> • Number of participants trained • Categories of training (e.g., kit assembly, correct use) • Training curricula • Hands-on practice 	<ul style="list-style-type: none"> • Midwives • TBAs 	<ul style="list-style-type: none"> • Review of records • Observation checklists for kit assembly and correct use
Kit assembly	<ul style="list-style-type: none"> • Supplies/stock • Training • Production • Quality assurance 	<ul style="list-style-type: none"> • Health workers • Kit assembly staff 	<ul style="list-style-type: none"> • Review of records • On-site observation using a predesigned checklist • Informed discussions with assemblers
Kit distribution	<ul style="list-style-type: none"> • Number of kits distributed • Distribution channels used • Number of distribution sites • Types of distribution sites 	<ul style="list-style-type: none"> • Storeroom managers • Commercial and social marketing distributors, wholesalers, and retailers • TBAs • Community health workers 	<ul style="list-style-type: none"> • Review of records • Checklist of numbers of kits distributed by whom, by each distribution site, and over what period of time • Informal discussions with TBAs, community health workers, retailers, wholesalers, and distributors
Quality of kits	<ul style="list-style-type: none"> • Storage conditions • Completeness of contents • Quality of material used in kit assembly • Correct assembly techniques 	<ul style="list-style-type: none"> • Staff responsible for condition of kits at various storage and distribution sites 	<ul style="list-style-type: none"> • Observation checklist • Random check of delivery kits
Promotional activities	<ul style="list-style-type: none"> • Print materials, posters, danglers • Kit packaging, radio spots, rickshaw broadcasts, and village gatherings • Introductory training of health workers and TBAs • Local media 	<ul style="list-style-type: none"> • Retailers • Community leaders • NGOs • Media venues 	<ul style="list-style-type: none"> • Count numbers of promotional materials that are in stores, pharmacies, etc. • In-depth interviews to assess community awareness

Informal Monitoring

During visits to sites where basic delivery kits have been locally distributed and promoted, kit project managers should conduct informal discussions and observations of activities to identify and resolve problems.

Resolving Problems

Table 9 provides some examples of problems that may occur in the project, possible causes, and appropriate solutions.

Table 9. Common Problems, Causes, and Solutions for Basic Delivery Kit Projects

Problem	Possible Causes	Possible Solutions
TBAs continue to use unclean delivery practices.	<ul style="list-style-type: none">• TBAs have not been identified, trained, and motivated to use clean delivery techniques.• TBAs do not want to change what they have always done.	<ul style="list-style-type: none">• Identify and train TBAs.• Motivate TBAs to use delivery kit through provision of incentives or removal of barriers.
Basic delivery kits are not available at the time of delivery in certain areas of the district, even though personnel/TBAs have been trained.	<ul style="list-style-type: none">• Basic delivery kits have not been distributed to all parts of the district/province.• Too few kits are being assembled to meet demand.• TBAs are not taking the kits to the place of delivery.• Kits are not being re-supplied in a timely manner.	<ul style="list-style-type: none">• Ensure that distribution routes and kit outlets are established in all areas of the district.• Expand the production capacity at assembly sites or establish additional sites.• Remind TBAs to take the kits to the place of delivery.• Provide incentives.
Community demand for basic delivery kits is low.	<ul style="list-style-type: none">• Communication strategies were not targeted to pregnant women and TBAs.• Men are not aware of the benefits.	<ul style="list-style-type: none">• Determine target audiences (e.g., pregnant women, TBAs) and develop communication efforts targeted specifically to them.• Design specific messages to motivate TBAs to use clean delivery practices.• Develop messages that promote the benefits of the delivery kit.

Table 9 (continued)

Problem	Possible Causes	Possible Solutions
Supervisors are not making supervisory visits.	<ul style="list-style-type: none"> • There is no incentive to make these visits. • Motivation is lacking. 	<ul style="list-style-type: none"> • Senior staff can ask supervisors for records of supervisory visits and give appropriate feedback. • Kit project managers can explain the importance of “supportive supervision” to the supervisors.

Evaluation

The purpose of evaluating a basic delivery kit project is to assess its successes, challenges, and impact. For example, a basic delivery kit project may have several possible goals, including improved birth outcomes and increased awareness and practice of clean delivery techniques. Evaluation involves monitoring the project’s progress in achieving these objectives. Evaluation is performed both during a project and near the completion of the project. Mid-term evaluations are helpful in making corrections during subsequent phases of the project.

Evaluation can help the kit project manager and staff identify lessons learned and decide on future directions of the project. It also can be an important exercise to identify the degree of success in integrating clean delivery activities with safe motherhood and child survival programs. The more that kit project partners at all levels (including TBAs, mothers who have used the kit, assemblers, and retailers) are involved in the evaluation, the more opportunity there will be for valuable data to be collected. A participatory approach to evaluation means inviting these individuals to be a part of designing and carrying out the evaluation plan from the beginning to the end.

Evaluation Plan

The evaluation plan should:

- involve a wide range of individuals and agencies involved with the basic delivery kit;
- determine which aspects of the project should be evaluated;
- identify the type and quantity of data required;
- determine which data collection methods should be used;

- identify the consultant(s) to conduct the evaluation and prepare a report including recommendations; and
- designate time, resources and staff necessary to form a plan of future action based on lessons learned from the evaluation.

EXAMPLE FROM THE FIELD: ETHIOPIA



In Ethiopia, the Christian Children's Fund (CCF) and the Family Health Department of the MOH are jointly engaged in a program to reduce maternal and neonatal morbidity and mortality resulting from tetanus. To accomplish this, the agencies plan to increase tetanus toxoid (TT) immunization coverage for women of childbearing age and to increase the number of deliveries attended by trained attendants. CCF and the MOH will conduct the program for one year in four districts in the Amhara region and one district in the Oromia region.

The project will promote clean delivery practices through the training of birth attendants and the provision of locally produced disposable delivery kits. In addition, the project will introduce an intensive information, education, and communication

(IEC) strategy to encourage clean delivery practices. This program will be integrated with the Safe Motherhood Initiative and the MOH's Maternal and Child Health Services.

The national and local MOH offices will monitor and evaluate the program through quarterly supervision and a final evaluation. The project will use home-based maternal records to provide service providers with pre- and post-delivery information regarding mothers and their infants. To ensure sustainability, expert project staff will train health workers in technical and managerial skills, and train traditional birth attendants in clean delivery practices and community promotion of immunization.⁶

Evaluation Methods

Kit project managers should identify when the evaluation data will be collected, and which geographic areas they will include. If targets have been set for particular stages of the project, kit project managers should evaluate them accordingly.

Several methods can be used to gather data for evaluating a basic delivery kit project:

- routine reporting systems,
- information from monitoring/supervisory activities,
- review of records,
- sales figures,
- health facility and/or provider surveys,
- household surveys,
- program reviews, and
- special research studies.

The choice of evaluation method(s) will depend on the availability of time, staff, and financial resources; the stage of the project; and the complexity and reliability of the data-collection method. For example, reviews of reported data can be more easily and frequently conducted than can household surveys or provider surveys. Table 10 provides additional information about these evaluation methods.

Impact Evaluation

An evaluation of the impact of kits on maternal and neonatal morbidity or mortality is difficult and expensive to implement, and may be beyond the resources of most MCH programs. The challenge lies in the difficulty of separating the impact of the basic delivery kits from other interventions or controlling other relevant factors (such as what is put on the cord immediately after cutting). Funding research to evaluate the impact of basic delivery kits, therefore, is not generally recommended. Rather, kit project managers should direct their future research efforts toward maximizing sustainability of manufacture and distribution of kits, and evaluating marketing strategies.⁷ Process evaluation, described later, generally is a better tool for tracking progress and program implementation.

EXAMPLES FROM THE FIELD: A QUANTITATIVE EVALUATION OF THE CLEAN HOME DELIVERY KIT IN NEPAL



In Nepal, funds from UNICEF, USAID, and Save the Children Alliance were provided from 1994 to 1996 to develop a clean delivery kit. In 1997, USAID funded PATH to conduct an evaluation of the kit's immediate impact on cord infection.⁸

Data Collection

Beyond immediate impact of the kit on cord infection, interviewers collected data from kit users regarding their level of satisfaction with the kit, where they obtained the kit, price, and preferred outlet for purchasing kits. Non-users were asked why they did not use a kit.

Method

Structured interviews were used to gather information on newborn status, behavior of TBAs, breastfeeding behavior, and future intention to use a clean delivery kit. Socio-demographic factors and women's health histories also were collected, and mothers were asked about kit acceptability and social marketing strategies.

To aid in the identification of cord infection, interviewers showed respondents color photos of cord stumps, and the interviewer also inspected the infant's cord, if possible. A neonatologist reviewed questionnaires to further determine instances of cord infection. A field supervisor reviewed all data and

ascertained the ability of mothers to identify their infant's diagnosed cord infection by comparing their situation to photos of cord infection.

Major Findings

There were several interesting findings with regard to birth practices in this area of Nepal:

- More than 90 percent of kit non-users (96.7 percent with trained attendants and 91.6 percent with untrained) used a new or boiled blade to cut the cord.
- Among trained attendants, slightly more kit users washed their hands before cutting the cord (96 vs. 90 percent); but among untrained attendants, many more kit users than non-users washed their hands (91 vs. 76 percent). Kit users were more likely to use soap, among both trained (96 vs. 73 percent) and untrained attendants (84 vs. 46 percent).
- About 70 percent of all attendants put nothing on the cord immediately after cutting. Of those who put something on, trained attendants were more likely to use Dettol, while untrained attendants used ash.
- About half put a clean cloth on the stump, and less than 5 percent left it uncovered.

(continued on next page)

- A high proportion of kit users (89 to 99 percent) used the various components correctly, but less than 20 percent followed the pictorial messages about prompt wrapping or immediate breast feeding.
- Kit users had less than half the cord infection rate (0.45; 95 percent C.I. 0.25-0.81) of kit non-users who did not use a new or boiled blade and clean cutting surface (after adjusting for confounders), but there was no significant difference between kit users and any other group of kit non-users, suggesting that clean cord cutting is one of the most important practices in preventing infection.
- Although not statistically significant, use of mustard oil and Dettol were somewhat protective, while use of ash increased infection.
- Use of a clean cloth on the stump and washing hands with soap before cutting the cord were both significantly associated with reduced infection.
- Health workers were the most common source of information about kits. More

than 90 percent of users planned to buy kits again.

Conclusion

Where unhygienic practices are widespread, inexpensive clean delivery kits designed to suit local needs and tastes can contribute to a reduction in infection, but only when the kits are accompanied by other clean delivery practices. If clean cutting implements are already used, special kits may not add much benefit.

Although management of cord cutting is a critical step, the substances and/or materials put on the cord afterward also are important. The kit can provide the necessary components to make compliance with hygiene messages easier, but its value can be reduced if it is not part of a comprehensive strategy to reduce obstetric and newborn complications.

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Process Evaluation

Process evaluation is invaluable in assessing delivery kits. Process evaluation tools are research instruments and training guidelines that help the kit project manager understand the feasibility and progress of the program. They can and should be used throughout the life of the program. Both quantitative surveys and qualitative research methods can be used.

Process evaluation tools include:

- qualitative research instruments including: focus group discussion and in-depth interview guides for interviewing women of reproductive age, traditional birth attendants, and household purchasers during the needs assessment;
- in-depth interview guides for retailers to gather information on how they promoted the delivery kit and what promotional strategies were most effective;
- a topic guide to pretest the kit package design, name, and logo;
- a postnatal follow-up questionnaire to interview women who used the delivery kit; and
- in-depth interview topic guides or a survey questionnaire for purchasers to determine their opinions of promotion activities.

The advantages of process indicators are that they:

- provide ongoing information on what action should be taken to improve the program;
- are not expensive and, therefore, can be applied consistently; and
- can be used for an initial situation analysis, as well as to monitor progress.⁹

Process evaluation of basic delivery kits focuses on three key issues: increased awareness of clean delivery practices, availability of the kit to the user, and proper use of the kits. Process indicators that reflect these issues might include:

- increases in the number of women and/or TBAs who are aware of clean delivery practices,
- increases in the number of women and/or TBAs who practice clean delivery techniques when using the delivery kit,
- increases in the number of delivery kits distributed or sold during the program period,

Changes in Home Delivery Practices in India

“In all the districts the introduction of the delivery kit was followed by heightened awareness about clean delivery practices. . . . Mothers were very happy that the government and TBAs had taken steps to ensure safe delivery. More than 90 percent of households visited were quite enthusiastic about the delivery kit. . . . Mothers said that the kit is very simple and has the great advantage that at the last moment before delivery, the family or TBA does not have to worry or panic about collecting the different components . . . the kit prevents the use of unclean things.”⁵

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- increases in the number of retail and NGO sites selling the kits,
- the level of promotional activities in program areas, and
- increases in numbers of births during which a basic delivery kit was used.

Other process indicators also are very useful. For example, measuring changes in attitudes and delivery practices following the availability and sale of delivery kits over a certain period (such as 9 to 12 months) would support the effectiveness of the basic delivery kit project.

As another example, in small projects, if the proportion of home deliveries conducted by TBAs using delivery kits is to be evaluated, the following data should be collected:

- the total number of home deliveries during a certain time period, and
- the number of home deliveries conducted by TBAs using a basic delivery kit during the same time period.

Table 10 provides additional examples of process indicators and evaluation methods.

Table 10. Evaluating a Basic Delivery Kit Project

Process Evaluation Indicator	Information Required	Process Evaluation Indicator Information Required Evaluation Method
Usage in home deliveries	<ul style="list-style-type: none"> • Number of home deliveries • Number of home deliveries in which the kit is used 	<ul style="list-style-type: none"> • Household survey
Correct use of delivery kit	<ul style="list-style-type: none"> • Number of TBAs using the kit • Number of TBAs who use the kit correctly 	<ul style="list-style-type: none"> • Observation of birth demonstrating use of the kit (simulation) • Follow-up interviews
Kit use by TBAs	<ul style="list-style-type: none"> • Number of TBAs attending home deliveries • Number of TBAs using delivery kits 	<ul style="list-style-type: none"> • Household survey
Possession of kits by pregnant women	<ul style="list-style-type: none"> • Number of pregnant women in third trimester of pregnancy with kit 	<ul style="list-style-type: none"> • Household survey • Follow-up interviews

Table 10 (continued)

Process Evaluation Indicator	Information Required	Process Evaluation Indicator Information Required Evaluation Method
Community awareness	<ul style="list-style-type: none"> • Awareness of kits • Attitude toward use of delivery kits • Understanding of kit benefits • Source of information regarding delivery kits 	<ul style="list-style-type: none"> • Focus group discussions • In-depth interviews
Attitudes toward benefits of kits	<ul style="list-style-type: none"> • Information from TBAs, maternity facility staff, and community leaders 	<ul style="list-style-type: none"> • Focus group discussions • In-depth interviews
Review of tetanus, puerperal sepsis, and cord infection	<ul style="list-style-type: none"> • Total number of deliveries • Number of newborns who had tetanus • Number of newborns who had cord infections • Number of mothers who had tetanus • Number of mothers who had puerperal sepsis¹⁰ 	<ul style="list-style-type: none"> • Household survey • Medical facility survey

Data Analysis and Interpretation

Kit project managers (or an outside consultant) should carefully analyze the results from all data sources. Based on the data analysis, successful and/or problematic project components and the relationship between them should be determined.

At predetermined times during the project, evaluation results should be discussed with program staff and other individuals involved in the project, including kit assemblers, distributors, TBAs, and health workers. Timely feedback will help staff identify problems, discuss solutions, and revise project activities accordingly.

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RECOMMENDATIONS AND CONCLUSION

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7.1 RECOMMENDATIONS

General Recommendations

To reduce the incidence of neonatal and maternal tetanus and sepsis, maternal and child health programs should implement a multi-pronged approach that includes:

- providing adequate tetanus toxoid (TT) immunization of women of reproductive age,
- increasing community awareness and training of birth attendants in clean delivery practices, and
- introducing basic delivery kits for home deliveries.

Maternal and child health programs seeking to improve delivery practices should carefully assess the need for adding a basic delivery kit to their services—before purchasing existing kits or developing a basic delivery kit project. Basic delivery kits have numerous advantages in countries where resources are limited and births are conducted by trained or untrained attendants, or completed by pregnant women alone at home.

When designing a basic delivery kit project, program managers should review the lessons learned from organizations that have had experience in kit project implementation. Recommendations collected from a wide range of agencies are helpful to review, so that project managers learn from past mistakes and successes. Importantly, no one basic delivery kit design will be appropriate for all countries or regions.

The development, production, and distribution of kits should be based on community needs, cultural traditions, and resources. These factors should be determined through a qualitative needs assessment and should consider research from similar settings. It is helpful to involve men in basic delivery kit projects, as their involvement can improve their understanding of and concern for delivery issues and, therefore, obstetric emergencies.

Whenever possible, basic delivery kit projects should not be implemented as independent projects; rather, they should be thoroughly integrated into existing maternal and child health programs and/or clean delivery programs. Because of the wide range of factors and issues, it is important for basic delivery kit project managers to share their experiences with groups working in different countries.

In addition to these general recommendations about basic delivery kit projects, a list of specific recommendations about kit production and promotion follows.

Kit Production

- Qualitative research, including focus group discussions and in-depth interviews, should be used to conduct the comprehensive needs assessment; design the kit; determine kit contents; determine acceptable cost of the kit; identify market segments; and develop promotional messages, materials, activities, and channels.
- The inclusion of each item in a basic delivery kit should be based on a solid rationale taking into consideration World Health Organization (WHO) and United Nations Population Fund (UNFPA) recommendations regarding essential kit components, cost, need, program objectives, and local cultural beliefs and practices.
- The decision of whether to produce the kit centrally (to reduce costs, achieve better quality control, and ensure availability of supplies) or regionally (to increase community involvement, maximize acceptability, and ensure continuity of supply) will vary depending on the objectives of the project.
- In production by local women's groups, issues of fair compensation and proper working conditions must be addressed.
- Quality assurance measures for production are crucial and should be built into all stages including assembly, storage, and distribution.

Marketing and Distribution

- The success of a social marketing approach depends on a clearly defined plan that includes short- and long-term goals.
- The price of a commercial or partially subsidized basic delivery kit should be based on market research to ensure consumer access.
- A minimum price should be charged for basic delivery kits to confer value from the consumer's perspective.

- A variety of distribution systems should be used to maximize distribution of the kits.

Promotional Strategies

- Behavior change and communication activities should include various target audiences, including policymakers, traditional birth attendants (TBAs), health workers, family decision-makers, men, and pregnant women.
- Promotional costs must be included in the total kit price or be covered by subsidies.
- Collaboration with governmental agencies and nongovernmental organizations (NGOs) to promote and distribute the kit greatly expands the scope of the delivery kit project, provides partial subsidy, and increases the general awareness of clean delivery.
- Use of appropriate language and sensitivity to local, regional, and national customs are important considerations during message development. Pretesting items such as the package label and the pictorial insert is critical to ensuring that messages are well understood.
- Proper use of basic delivery kits should be included in the regular training of TBAs and other health workers.
- Evaluation of promotional messages and materials should be an ongoing process.

7.2 CONCLUSION

The *Basic Delivery Kit Guide* has provided an overview of major issues related to basic delivery kit projects. Ultimately, the Program for Appropriate Technology in Health (PATH) hopes that this resource will increase awareness and use of clean delivery techniques through the supportive technology known as the basic delivery kit.

As emphasized throughout this guide, delivery kit projects must be well integrated into maternal and child health programs. As a means to prevent tetanus, basic

delivery kit projects complement—but do not replace—tetanus toxoid immunization programs.

Clearly, the development of these kits is a complex process. The final product is a combination of what potential buyers want in a kit and what they feel is affordable, what public health managers see as appropriate medical interventions, and what is programmatically feasible, given available funding.

Agencies concerned about maternal and child health must approach this process with respect for local cultures and traditions; they must work with community leaders and local agencies and have a realistic sense of what they can accomplish. Without such precautions, their efforts may result in a kit that is not used (or used improperly) and, therefore, does not contribute to the reduction of rates of maternal and neonatal morbidity and mortality in the region.

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