SUSTAINING AND EVALUATING 6 **BASIC DELIVERY KIT PROJECTS**



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

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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 governmentoperated medical stores and sold along with other essential medications.
 This also lends the kit credibility that will contribute to its sustainability.²

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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.

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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

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

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

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

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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	 Number of participants trained Categories of training (e.g., kit assembly, correct use) Training curricula Hands-on practice 	Midwives TBAs	Review of records Observation checklists for kit assembly and correct use
Kit assembly	Supplies/stockTrainingProductionQuality assurance	Health workers Kit assembly staff	 Review of records On-site observation using a predesigned checklist Informed discussions with assemblers
Kit distribution	 Number of kits distributed Distribution channels used Number of distribution sites Types of distribution sites 	Storeroom managers Commercial and social marketing distributors, wholesalers, and retailers TBAs Community health workers	 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	 Storage conditions Completeness of contents Quality of material used in kit assembly Correct assembly techniques 	Staff responsible for condition of kits at various storage and distribution sites	Observation checklist Random check of delivery kits
Promotional activities	 Print materials, posters, danglers Kit packaging, radio spots, rickshaw broadcasts, and village gatherings Introductory training of health workers and TBAs Local media 	RetailersCommunity leadersNGOsMedia venues	 Count numbers of promotional materials that are in stores, pharmacies, etc. In-depth interviews to assess community awareness

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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.	 TBAs have not been identified, trained, and motivated to use clean delivery techniques. TBAs do not want to change what they have always done. 	 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.	 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. 	 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.	 Communication strategies were not targeted to pregnant women and TBAs. Men are not aware of the benefits. 	 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.	 There is no incentive to make these visits. Motivation is lacking. 	 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

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 preand 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. Nonusers 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. Sociodemographic 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.

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- 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.

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.

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Process evaluation tools include:

- qualitative research instruments including: focus group discussion and indepth 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

- 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	Number of home deliveriesNumber of home deliveries in which the kit is used	Household survey
Correct use of delivery kit	Number of TBAs using the kitNumber of TBAs who use the kit correctly	 Observation of birth demonstrating use of the kit (simulation) Follow-up interviews
Kit use by TBAs	 Number of TBAs attending home deliveries Number of TBAs using delivery kits 	Household survey
Possession of kits by pregnant women	Number of pregnant women in third trimester of pregnancy with kit	Household survey Follow-up interviews

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Table 10 (continued)

Process Evaluation Indicator	Information Required	Process Evaluation Indicator Information Required Evaluation Method
Community awareness	 Awareness of kits Attitude toward use of delivery kits Understanding of kit benefits Source of information regarding delivery kits 	Focus group discussionsIn-depth interviews
Attitudes toward benefits of kits	Information from TBAs, maternity facility staff, and community leaders	Focus group discussionsIn-depth interviews
Review of tetanus, puerperal sepsis, and cord infection	 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 	 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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