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Improving Health
through Behavior Change
A Process Guide on
Hygiene Promotion

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Many of the program experiences described derive from EHP II hygiene promotion projects in the Dominican Republic, Peru and Nicaragua, all of which received technical assistance from Marco Polo Torres; as well as the Malawi School and Nutrition Program, which received technical assistance from Lisa Sherburne. The primary organizations implementing these programs are Catholic Relief Services (CRS), Dominican Women in Development (MUDE), World Vision, and National Water Authority’s Department of Rural Aqueducts (INAPA)/Dominican Republic, Plan International/Peru and Nicaragua, and Save the Children/Malawi.

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Cover Art

Photograph – March 7, 2004, “Girl washing hands,” Community of Kallarayan, province of Cusco, Peru. The picture was taken during a home visit with the hygiene promoter to one of the families she visits regularly. Photographer: Maribel León Wharton

Graphics – the three sets of three graphics were used as promotional materials in the hygiene behavior change pilots in Nicaragua (upper left), Peru (upper right), Dominican Republic (lower right).

Acronyms

BCC	behavior change communication or behavior centered communication
BCP	Behavior-Centered Programming SM
CBO	community-based organization
CHW	community health worker
DRP	diagnostic role play
EHP	Environmental Health Project II
FGD	focus group discussion
HIF	hygiene improvement framework
IDI	in-depth interview
IMCI	integrated management of childhood illness
KAP	knowledge, attitudes, practices
M&E	monitoring and evaluation
MOH	ministry of health
NGO	nongovernmental organization
ORT	oral rehydration therapy
PAHO	Pan American Health Organization
PP	public/private
PVO	private voluntary organization
TIPs	trials of improved practices
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Preface

What Is this Guide?

The purpose of this guide is to support planning and management of effective hygiene promotion for the purpose of preventing diarrheal disease. To do this, the guide provides a systematic description of a methodology called Behavior-Centered Programming^{SM*} (BCP).

In the past decade, manuals have been published on how to use BCP to address other public health issues: young child feeding, breastfeeding and micronutrient malnutrition. While the logic of the process is the same regardless of the health issue, the technical and behavioral issues differ, so it may help program designers and managers to have guidance on applying this approach to particular areas of interest. For example, the behaviors related to exclusive breastfeeding are primarily governed by cultural norms, mothers' beliefs and perceptions, and the sometimes strong influence of older female family members. In contrast, access to technologies often plays a major role in hygiene behavior change, while access to and quality of health services plays a role in many other practices (e.g., those related to immunization, care-seeking for health emergencies and micronutrient supplements).

Why Was It Written?

Based in part on the promise of its experience with a hygiene improvement project in Hato Mayor Province, the Dominican Republic, the USAID-funded Environmental Health Project (EHP II) and the Pan American Health Organization (PAHO) collaborated with local partners to establish similar programs in the Cusco area of Peru and in Chinandega Department of Nicaragua. These small-scale experiences, implemented by private voluntary organizations (PVOs) in collaboration with ministries of health, provide some of the examples of materials and instruments described in this guide. EHP and PAHO agreed to collaborate on producing and disseminating a manual on BCP for hygiene improvement as used in these and other projects.

Who Is the Audience?

This guide is intended for health planners and managers in governmental, non-governmental and international organizations working at the district, provincial, regional or national levels in developing countries, as well as for organizations that support programs at those levels. While the objective is to aid users in designing and

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implementing effective diarrheal disease prevention programs, the process and principles described should be helpful in planning and implementing any program that addresses child (or public) health in most settings. However, because this guide focuses on hygiene behaviors, it does not provide detailed discussions of behaviors, barriers, strategies and issues related to other basic health interventions.

How Can this Guide Be Used?

This manual, with the additional resources available on the accompanying CD-ROM, may be used as a whole to guide program development, implementation and evaluation; or individual chapters, sections, and tools may be used to support particular program tasks. For example, the document contains question guides for information-gathering that can be adapted for a specific information-gathering task in developing new programs or assessing existing initiatives. The guide can serve as a resource for developing training sessions on behavior change for staff, partners, community or staff, health promoters and others. Chapter 8 includes general advice on training design, and additional resources are available on the CD-ROM.

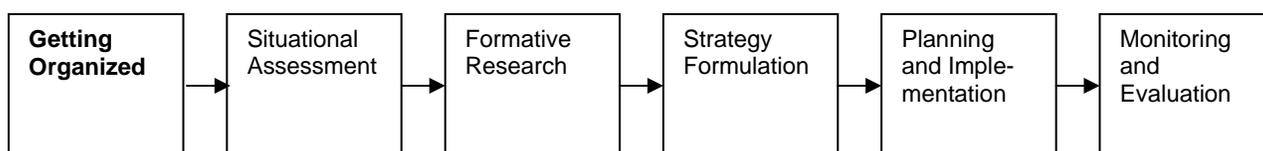
One specific potential use of this manual is in the design and implementation of behavior change activities focused on the prevention of diarrheal disease in PAHO's approach to community IMCI (C-IMCI), in which local actors such as teachers, community leaders, religious leaders, and members of women's groups are actively involved in the promotion of a wide range of key family practices.

However, this document alone will not enable all readers to acquire the specialized epidemiological, qualitative-research and materials-development skills needed to carry out Behavior-Centered ProgrammingSM. It is primarily intended to guide users in planning and managing the process effectively and in deciding if and for what tasks they need to access additional skills. The CD-ROM contains many documents to support users, and may eliminate the need for additional resources at certain points in the process.

Ideally, ministries of health and other major coordinating organizations will use this guide to create greater consistency and effectiveness of hygiene-promotion activities among state and local programs with which they work – by examining diarrheal prevention through a behavioral lens and “rationalizing” a comprehensive package of activities that address barriers and support the ability of families and communities to take necessary actions.

How Is the Guide Organized?

After an introduction on diarrheal disease and hygiene promotion (and their broader child health context) and a synopsis of BCP, the guide follows the chronological steps in a methodology designed to plan and implement program activities. Each chapter begins with the following flow chart, with the relevant steps highlighted in bold print.



The table below presents the steps in more detail, with the estimated time required for each, and the chapter that addresses each step.

Basic Steps in Behavior-Centered ProgrammingSM

Steps	Time Range for a Sub-national Project	Chapter
Identify diarrheal disease as a problem to address, form a project team, engage partners	1 to 3 weeks	3
Identify, obtain, review and analyze existing information	1 to 3 weeks	4
Plan and organize formative research to obtain community input into program design	1 to 3 weeks	5
Carry out and analyze exploratory research (optional)	2 to 5 weeks	6
Carry out and analyze behavioral trials (optional but highly recommended)	2 to 4 weeks	6
Carry out and analyze checking research (optional)	1 week	6
Prepare research summary and recommendations	1 to 2 weeks	6
Formulate behavior-change strategies	1 week	7
Complete preparatory steps (baseline survey [optional]; detailed work planning; materials preparation, production, and dissemination; training; etc.)	4 to 12 weeks	8
Implement activities	Ideally several years	8
Monitor implementation	Ongoing + periodic small studies	9
Evaluate	Several weeks, normally at least 1 year after implementation begins	9

BCP is not a cookbook approach in which the user can simply “fill in the blanks” and come up with a program. After all, achieving health-promoting behavior changes depends on understanding and working within the local context and resources. BCP is a process through which planners and community members collaborate to learn about current behaviors as well as local knowledge and resources. Planners use these insights, and the scientific evidence of the health impact of various behaviors to

define the most efficacious and feasible behaviors possible in the context and then lay out a strategy for how to best promote and facilitate those behaviors. It requires that planners make a series of strategic decisions on what the program and its local collaborators should do and how. While there is a strong logic to the process, how the individual steps are carried out will vary substantially by the epidemiological situation, setting, and human and financial resources. The text attempts to point out appropriate alternative ways of carrying out many of the steps in the process.

1. Introduction

Diarrheal Disease and Children's Health

Diarrheal diseases take a tremendous toll on children and their families in the developing countries. With approximately 1.3 million children under the age of five dying from diarrheal diseases each year, these diseases remain a leading cause of child death in the world today. This remains the case despite the fact that mortality from diarrhea has decreased substantially over the past two decades due, in particular, to the widespread use of oral rehydration therapy (ORT) and the increased ability of caretakers to identify danger signs and then to quickly get help for the sick child.

So while deaths caused by diarrhea have declined, morbidity – the illness burden associated with diarrhea – has not decreased. “The average young child in the developing world, be it Asia, sub-Saharan Africa or Latin America, experiences four to five episodes of diarrhea per year” (Murray and Lopez). Diarrhea adversely affects children's nutritional status, contributing to approximately half of all under-five deaths in less developed countries. Beyond these direct health effects, the millions of cases of child diarrhea have a significant impact on the way mothers spend their time on household expenses for treatment (medicines, transport and health facility charges), as well as on lost work, wages and productivity by the working members of the household.

It is estimated that 90% of all cases of diarrhea can be attributed to three major causes: inadequate sanitation, poor hygiene and unclean water (World Health Organization). The prevalence of diarrheal diseases and the unconscionably high child mortality rates, which are directly or indirectly linked to contaminated water and food sources, can only be reduced through larger and more effective investments in preventive and promotional measures to reduce and eliminate the causes for the illnesses. (The above description is adapted from Kleinau et al.)

Prevention of Diarrheal Disease

There are numerous paths by which the agents that cause diarrhea enter a person's body. These include:

- Fluids (through contaminated water)
- Fields (resulting from defecation outdoors)
- Flies (transmit disease)

- Fingers (contaminated fingers transmit disease)
- Food (infected by fluids, flies or fingers and then ingested)

It would be impractical for a health promotion program to address every one of the dozens of conditions and behaviors that affect these five major routes of transmission. Programs must prioritize their efforts by focusing on those positive hygiene practices that have demonstrated the greatest impact. While the specific behaviors most likely to have a health impact in a particular setting may vary, there are certain hygiene practices that have proven to have the greatest potential for preventing diarrhea. They are:

- Preventing contamination of food, water and fingers just before ingestion (with handwashing and by treating water for drinking and cooking)
- Facilitating clean hands, surfaces and containers (through actions to increase the quantity of water available for the family)
- Reducing contamination in the environment (particularly safe disposal of feces)

According to a recent paper from the International Water and Sanitation Centre (Appleton and van Wijk, Page 9), “Improved water quality reduces childhood diarrhea by 15–20% BUT better hygiene through handwashing and safe food handling reduces it by 35% AND safe disposal of children’s feces leads to a reduction of nearly 40%.”

The Hygiene Improvement Framework

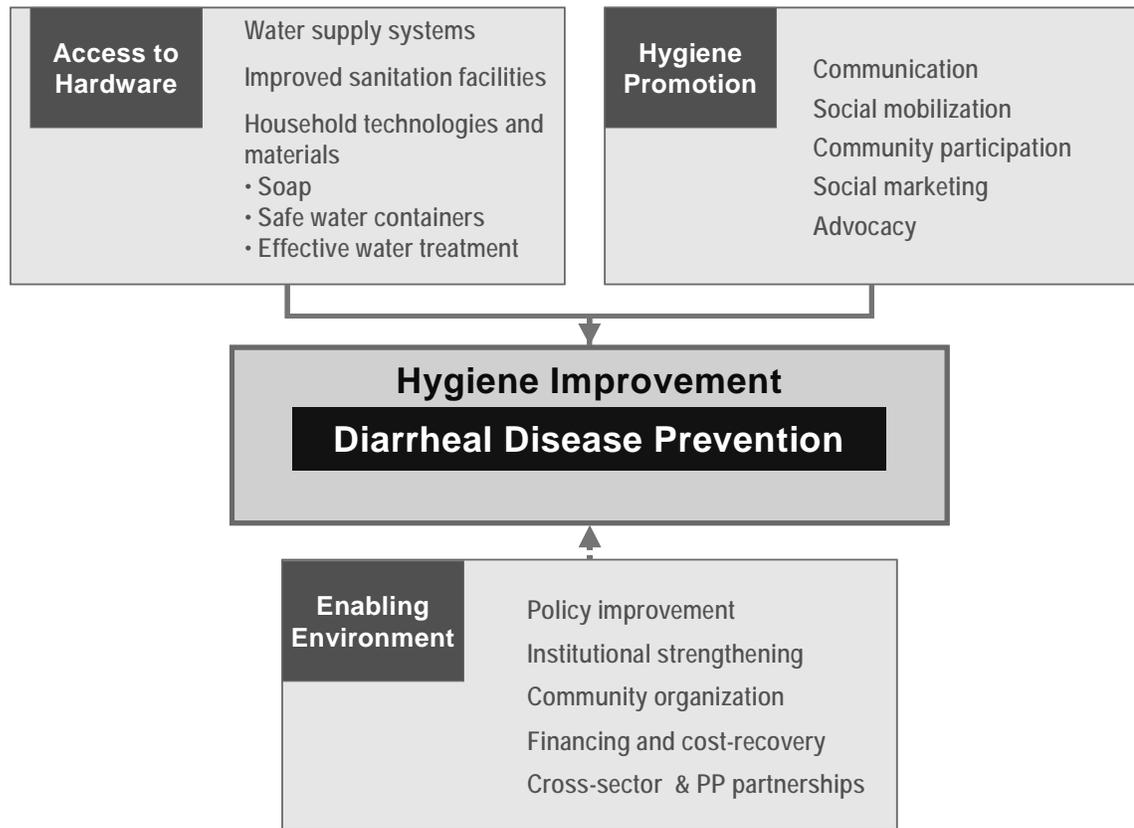
The USAID/Environmental Health Project (EHP) Hygiene Improvement Framework (HIF), shown below, indicates the three major determinants of hygiene improvement and a number of potential strategies for program action within each category.

The HIF is a comprehensive approach for preventing diarrhea by improving:

- Access to Hardware – enhancing access to water/sanitation infrastructure and household technologies such as household chlorination systems and soap
- Hygiene Promotion – promoting hygiene behaviors such as handwashing, safe water storage, and appropriate excreta disposal
- Enabling Environment – strengthening an enabling environment that facilitates or enhances key technologies and behaviors. This may be accomplished through advocacy, training, institutional strengthening and other appropriate support mechanisms

The health sector can play an effective role in reducing diarrheal diseases in a number of ways. It can partner with sanitation and water supply improvement efforts in communities. It can provide hygiene promotion training and support materials for private and public health personnel and community-based volunteers. And it can advocate to the national ministry of health and local public health agencies for

resources and programs that support household and community hygiene improvement.



PP = public/private

The approach described in this guide is one way of devising an effective package of program, community and family actions from within the HIF to implement in the particular program situation. By promoting and facilitating the key behaviors shown to have a health impact, a behavior-centered approach can help identify appropriate program strategies within each component of the Hygiene Improvement Framework.

The methodology described in this guide – Behavior-Centered ProgrammingSM (BCP) – is a systematic approach for understanding behaviors and their context, developing comprehensive behavior-change strategies, and then converting those strategies into specific program activities that can be monitored, adjusted and evaluated over time. BCP focuses on identifying, facilitating and encouraging the most health-promoting behaviors possible in a particular context. It uses behaviors as the lens through which to view and organize logical and effective intervention packages that may encompass many of the actions contained in the HIF. While BCP certainly is not the only methodology possible for “operationalizing” the HIF, when it is implemented correctly, it has proved effective in many areas of public health, including hygiene improvement.

A full description of the HIF is available on the CD-ROM that accompanies this guide.

Diarrheal Disease Prevention in the Context of Integrated Management of Childhood Illness

Supported by the World Health Organization, UNICEF, the Pan American Health Organization, USAID, and numerous other international agencies and governments, the Integrated Management of Childhood Illness (IMCI) strategy focuses on reducing illness and death from the major causes of childhood illness – acute respiratory disease, diarrheal disease, malnutrition, malaria, vaccine-preventable diseases and others. Activities to prevent diarrhea fall within the community and household component of IMCI (commonly known as Community IMCI).

While IMCI initially emphasized improving the care of sick children, today it also serves to support efforts at the household and community levels to prevent disease in children. The IMCI partners promote key family practices that will foster the growth and healthy development of children under five. These practices are listed in the box below. Each of these key family practices encompasses multiple specific “behaviors” of mothers and others. Behaviors to achieve key family practices should be defined and refined for the specific settings in which programs operate.

In this listing, Key Family Practice 6 addresses the hygiene behaviors that most directly affect the prevalence of childhood diarrhea. Key Practices 1, 2, and 9 also contribute to reducing deaths due to diarrhea/dehydration (but are not a focus of this manual). Programs intending to reduce diarrheal mortality or to improve child health in general, should address these behaviors also. Although planners should look for opportunities to address multiple behaviors, it is wise to guard against overloading mothers, community volunteers, and others with too much information and too many suggested tasks at the same time. Therefore, it is recommended that key practices be phased over time into program activities.

Key Family Practices

For physical growth and mental development

1. Breastfeed infants exclusively for at least six months. (Mothers found to be HIV positive require counseling about possible alternatives to breastfeeding, on the basis of norms and recommendations by WHO/UNICEF/UNAIDS about HIV infection and infant feeding).
2. Starting at about six months of age, feed children freshly prepared energy and nutrient-rich complementary foods, while continuing to breastfeed up to two years or longer.
3. Ensure that children receive adequate amounts of micronutrients (vitamin A and iron, in particular), either in their diet or through supplementation.
4. Promote mental and social development by responding to a child's needs for care, through talking, playing, and providing a stimulating environment.

For disease prevention

5. Take children as scheduled to complete a full course of immunizations before their first birthday.
6. Dispose of feces, including children's feces, safely; and wash hands after defecation, before preparing meals, and before feeding children.
7. Protect children in malaria-endemic areas, by ensuring that they sleep under insecticide-treated bed nets.
8. Adopt and sustain appropriate behavior regarding prevention and care for HIV/AIDS-affected people including orphans.

For appropriate home care

9. Continue to feed and offer more fluids, including breast milk, to children when they are sick.
10. Give sick children appropriate home treatment for infections.
11. Take appropriate actions to prevent and manage child injuries and accidents.
12. Prevent child abuse and neglect, and take appropriate action when it has occurred.
13. Ensure that men actively participate in providing childcare, and are involved in the reproductive health of the family.

For seeking care

14. Recognize when sick children need treatment outside the home and seek care from appropriate providers.
15. Follow the health worker's advice about treatment, follow-up and referral.
16. Ensure that every pregnant woman has adequate antenatal care. This includes having at least four antenatal visits with an appropriate health care provider, and receiving the recommended doses of the tetanus toxoid vaccination. The mother also needs support from her family and community in seeking care at the time of delivery and during the postpartum and lactation period.

Note: WHO/PAHO currently refer to the key practices without a number attached to emphasize the desirability of each program to focus on those practices that address its priority child health problems.

In summary, it is recommended that programs:

- Prioritize problems and corresponding practices through community input
- Begin by addressing the priority practices that the human and financial resources of the community, the program and its partners can realistically manage
- Over time, address additional practices and expand the program's goals and scope in a reasonable and planned way.

2. Focus on Behavior

Behavior-Centered ProgrammingSM

Behavior-Centered ProgrammingSM (BCP) is a strategic process used to identify, promote and facilitate people carrying out behaviors that:

- Have a significant positive impact on a problem of interest
- Are feasible to achieve, meaning that most people in the program area are both willing and able to make changes

The main hygiene-related behavioral objectives that reduce diarrheal disease prevalence are: adequate handwashing at key times, proper feces disposal, use of safe water, and good food hygiene. The precise practices that each individual and family undertakes to reach these objectives, however, may vary (as described below).

The BCP process guides an exploration of the determinants of current behaviors, then “tests” possible “improved” behaviors (behaviors that favor better health) in order to produce a menu of feasible behaviors that will have a health impact and strategies that will motivate and facilitate those behaviors.

Program actions to motivate people and facilitate improved behaviors may include strategic communication, community (or collective) action, training, improved service delivery, new or improved products, technologies or infrastructure, and policy change. This is the same range of activities that might be used in any approach to health programming.

What is different about BCP is that it views the health problem addressed through a behavioral lens and then defines and promotes key behaviors. By providing a logical, disciplined and consultative method of selecting those strategic actions that are most essential for the behaviors needed for the desired health outcomes, this approach seeks to prevent planners from proposing their preconceived ideas.

In the past, some programs have simply introduced new services or technologies to address a health problem. For example, latrines have been built or a public source of water established with minimal, if any, effort to encourage appropriate use. In such cases, it soon becomes apparent that education on the use of technologies or services is also needed if the full health benefit of providing these technologies is to be realized. However, even adding an educational component does not ensure that the strategy to address the health problem is correct, nor that the education about a technological intervention will ensure its use.

In Ecuador and Jamaica, EHP assistance facilitated new technologies (improved water storage containers and appropriate latrines/bathrooms, respectively), but the projects emphasized changing behaviors, utilizing the technologies as part of the strategy for doing this. These interventions were successful, resulting in impressive reductions in the risk of cholera and other diarrheal disease (see Whiteford, Laspina, and Torres; and Daane, Lamb, and Perez).

The first step in BCP is to examine the epidemiology of the health problem. The project team then identifies the behaviors that are most feasible in the particular context that will most directly reduce or solve the problem. The essence of the strategy is providing support for those feasible behaviors.

A behavior is considered “feasible” if program, community or family actions can sufficiently use positive motivations and actions to eliminate or reduce the major barriers standing between current and “improved” health promoting behaviors. These barriers (sometimes called “resistances”) may be internal – such as a lack of awareness, motivation, positive beliefs and perceptions, and feelings of control – and/or external – such as a lack of money, time, access to key products or technologies, support from the family or community, or key program services.

Without a focus on behaviors from the very beginning, programs may end up with interventions that are under-used and that have only a modest impact. This is shown by the fact that many program evaluations find dramatic increases in knowledge and attitudes, but little or no change in behavior. Instead, focusing on behaviors (or the “P” element in KAP – knowledge, attitudes, practices) from the beginning should help prevent this from happening.

How Does Behavior Change?

Behaviors may change for many reasons. Generally, the factors that determine behaviors can be classified as **internal** or **external** determinants. In other words, factors that influence a current or new (changed) behavior can come from within a person (internal) or from that person’s environment (external). A person who perceives that latrine use is essential for her family’s health will be more likely to use a latrine. Her feelings are an internal determinant. Another person may consistently dispose of her young children’s feces in the latrine because her husband told her to do so and the local community health worker showed her how, or perhaps because all the other mothers in her community do so. The health worker’s lesson or the fact that the other mothers carry out this action are considered external determinants.

The following table lists the most common determinants of health behaviors. (Only some of these are likely to be relevant to hygiene behaviors.)

EXTERNAL DETERMINANTS	
Socioeconomic status	<ul style="list-style-type: none"> • Money to buy essential products, pay for services, pay for transportation • Literacy and education
Environmental constraints	<ul style="list-style-type: none"> • Time to do new behavior • Access to essential technology (e.g., soap, bed net, vitamin A capsules, iron pills, contraceptives, etc.) or other essential resources • Quality of some technologies (e.g., condoms that break, latrines that fill up with water) • Providers' manner of treatment (extent to which it is caring, kind and competent) • System problems such as lack of interest and encouragement of client orientation, funding or appropriate technical norms, which may limit providers' ability to change practices or procedures
Epidemiology	<ul style="list-style-type: none"> • Extent to which the local epidemiology of the problem allows program to address it effectively without extraordinary funding and/or complex new behaviors at multiple levels
Access to services and technologies	<ul style="list-style-type: none"> • Availability of water, latrines, soap, and other essential and appropriate hygiene products and technologies • Physical access, including distance to services, availability of public transportation to reach services, and condition of roads to reach services throughout the year • Days and hours of services • Availability of health personnel, drugs/vaccines, blood, medical supplies or equipment • Quality of service when compared to best practices • Degree to which service norms and provider behavior accommodate local cultural beliefs and perceptions, and/or client preferences • How providers treat clients, ranging from kindness and concern to public humiliation and abuse
Policy	<ul style="list-style-type: none"> • Current policies (e.g., taxation, charges for services, which providers may perform specific services)
Cultural norms	<ul style="list-style-type: none"> • Cultural norms regarding independence/dependence of person who needs to carry out the new behavior • How well the new behavior fits with firmly-held cultural beliefs or values
Skills	<ul style="list-style-type: none"> • Skills and confidence of the person who needs to do the new behaviors • Difficulty of doing the new behavior (i.e., skill level and/or degree of other environmental and cultural barriers) • Ease/difficulty for people to remember what to do and how (e.g., date for the next vaccination, maternal or child health danger signs, when to wash hands)
INTERNAL DETERMINANTS	
Intention	<ul style="list-style-type: none"> • Awareness of the problem and/or of feasibility of doing something about it
Emotion	<ul style="list-style-type: none"> • Perception of whether one should try to do something (including fatalism resulting from belief in destiny, God's will, curses, etc.)
Practical knowledge	<ul style="list-style-type: none"> • Knowledge of what to do and/or knowledge and skills of how to do new behavior
Perceived risks	<ul style="list-style-type: none"> • Fear of bad consequences/perception that the new behavior may lead to physical or psychological harm (e.g., fear of criticism or punishment, or belief that a vaccine or medicine will have serious side effects, including sterilization)
Perceived consequences	<ul style="list-style-type: none"> • Motivation to undertake the new behavior related to belief in its benefits
Perceived norms	<ul style="list-style-type: none"> • Perception of extent to which new behavior is the group norm
Self-efficacy	<ul style="list-style-type: none"> • Level of confidence in one's ability to do the behavior

To support behavior change, planners must learn about and then address both internal and external determinants. For example, encouraging a child to use a latrine may involve taking steps to reduce such fears of falling through the hole or being bitten by insects or vermin.

Behavior Change Myths and Realities	
<i>Myths</i>	<i>Realities</i>
Behavior change takes a long time.	Behavior change can occur very quickly.
Once people have adopted an “improved” behavior, they will continue to do it.	Most behaviors have to be reinforced and sustained over time, at least until they become social norms. Sustaining behavior, particularly after significant program inputs have ended, may be the greatest challenge programs face.
Once people know what the appropriate behavior is, they will do the right thing.	Knowledge alone is rarely enough to change behavior; motivation and enabling factors must also be addressed.
When people are shown that germs cause diarrhea, they will wash their hands.	People may be much more likely to wash their hands when it is perceived as socially desirable or for many other reasons.
It takes a “professional” to communicate about behavior change.	Well-trained and properly supported community volunteers or animators are often the most effective channels for change communications.

When considering knowledge as a behavioral determinant (or lack of knowledge as a barrier to change), it is important to recognize that there are two types of knowledge. The first – practical or logistical knowledge – is essential for adapting new behaviors. People must know how to do a behavior correctly – as well as when, and where to do it. The second type of knowledge – a scientific explanation of the reasons why the behaviors are important – may not be essential to achieve behavior change. Various beliefs and perceptions, rather than the desire to prevent diarrhea by eliminating germs, may in fact motivate handwashing and other desirable behaviors (see the discussion on motivation to change in Chapter 7). Therefore, it may not be productive to “educate” people about the latest scientific justifications for new behaviors.

Knowledge Is Not Enough

As indicated previously, just because people know what they should do and why does not mean that they will do it. For example, virtually all people who smoke or engage in unsafe sex know that these behaviors are potentially harmful, but clearly their behavior is not consistent with their knowledge.

This is why Behavior-Centered ProgrammingSM focuses on behaviors, using a consultative process to understand the reasons for current behavior and to determine what information and other supports are needed to promote improved behavior. For example:

In a setting where a program seeks to reduce the incidence of diarrheal disease, research may reveal that mothers are willing to chlorinate water but have a hard time figuring out how much chlorine to use for their particular water-storage container. To address this need, a program activity might then focus on helping mothers remember amounts to be used (e.g., using print materials or songs).

If parents indicate that children do not use latrines for fear of falling in, the response could be to promote construction of special seats for children that reduce the opening as well as to provide education and motivation for their use.

People may know they should wash their hands, know how to, and may even want to, but they lack access to soap or sufficient water. Or people may have knowledge and have access to soap and sufficient water but still do not wash their hands because of lack of time or lack of a compelling reason (motivation) to do so. It is these "barriers" that must be identified and overcome for people to undertake the new or changed behavior. Giving people particular information may be what's needed to overcome barriers, but other types of program actions may also be required.

Overview of the Approach

Behavior-Centered ProgrammingSM is a logical process that relies on the crucial input of families, communities and other participant groups throughout planning and implementation. The process takes an open, learning attitude towards hygiene behavior change. This attitude is manifested through regular "consultations" with families and communities during the formative research, planning and implementation stages, rather than following assumptions about what is happening and needed.

The process

- Assesses current behaviors related to the problem(s) of concern
- Identifies the barriers and enabling factors for improvements
- Discovers motivations
- Identifies feasible behaviors for change
- Involves individuals, families, communities, institutions and policymakers in developing and implementing effective change strategies

Following are the steps used to develop program recommendations and strategies for supporting them.

Steps to develop program recommendations	How to do each step	When to do each step
1. Select ideal behaviors.	Decide which ideal behaviors (essential hygiene practices) to promote.	Program conception
2. List essential actions of each ideal behavior.	Break down each ideal behavior into essential actions (sub-behaviors).	Program conception
3. Identify constraints to carrying out the essential actions.	Learn about current practices and which sub-behaviors are least practiced and why.	Situational assessment and formative research
4. Test possible solutions to the problems.	Use Trials of Improved Practices (TIPs) to learn what people are willing to try and are able to do, and what most influences them positively and negatively.	Formative research
5. Select solutions that will have a health impact and are feasible.	Review TIPs results as the basis for finalizing the essential hygiene practices and sub-behaviors to promote and ways of supporting them.	Strategy development

At the end of the planning phase, planners should know precisely what behaviors the program will promote and facilitate and how. The following brief explanations describe each of the steps listed above. Subsequent chapters provide substantial detail on each step.

1. Select the essential hygiene practices that your program intends to promote.

These are the *IDEAL BEHAVIORS* or behavioral objectives, which need to be broken down further. This guide will give details only on essential hygiene practices. Other essential family practices (e.g., related to breastfeeding, complementary feeding and measles immunization) that contribute to preventing diarrhea will not be covered in detail in this guide.

The program objective – “To Prevent Diarrheal Disease” – may be broken down into the following hygiene-related essential practices and sub-behaviors.

Essential Hygiene Practices

Ideal Practices (for families)	Essential Actions (Sub-Behaviors)	Comments
Always consume safe water (water handling, storage and treatment).	<ul style="list-style-type: none"> • Treat all water (except from confirmed safe sources) used for drinking and cooking by chlorination, filtration, boiling or solar disinfection to reduce pathogens. • Always cover water-storage containers or use narrow neck containers. • Extract water from a tap or with a clean utensil, such as a dipper. • Place container where young children cannot get into it. • Always use a different (clean) vessel or dipper to transfer water for drinking (or use a container with a tap). • Prevent anyone from putting his/her hands into the drinking water vessel, especially children. • Clean the water storage container twice a week with soap. 	<ul style="list-style-type: none"> • Chlorination at the household level can be effective, but to ensure that the family is adding the correct quantity of chlorine, programs may need to facilitate chlorine availability and ability of each family to use the same model water-storage container. Alternatively, provide individualized counseling on correct amounts of chlorine for the families' containers. • It is important to verify that vendors are not watering down the chlorine they sell. • Families must clean and replace filters if they are to be effective. • Boiling is rarely feasible because of the cost of fuel and the time required. • Solar disinfection is reliable when done correctly (see Mintz et al.).
Always safely dispose of feces, especially of children under 36 months of age.	<ul style="list-style-type: none"> • Have young children always use a potty, washable diapers or disposable diapers. • Always dispose of feces in a sanitary latrine or toilet. • Always wash the potty or washable diapers with soap and ensure that the wastewater from washing ends up in a sanitation facility. • Consistently put disposable diapers in covered garbage containers that are part of a solid waste disposal system that keeps the diapers out of the household and community environment. 	<ul style="list-style-type: none"> • None of these alternatives may be acceptable or feasible to some families. In such cases, an improved behavior would be for the mother to immediately sweep up child feces and dispose of them in a latrine. • Families with no access to a latrine can be encouraged to deposit feces in a hole into which dirt is frequently thrown; but the long-term solution should be facilitating a sanitary latrine or toilet. • The type and characteristics of a latrine – as well as how the family uses and maintains it – are critical to avoiding problems such as flooding, stench, insects and vermin, lack of light or privacy, nothing to clean with (e.g., paper), and others that prevent consistent use.
Wash hands with soap (or other effective cleansing agents) at critical times.	<ul style="list-style-type: none"> • Always use correct handwashing technique: rub at least three times, especially fingers; use a cleansing agent; use dripping or running water if possible; air dry or wipe on clean cloth. 	<ul style="list-style-type: none"> • A critical supportive behavior may be setting up a handwashing area with water, a cleansing agent and proper drainage. • Where water is limited, a Tippy Tap device may help (see

	<ul style="list-style-type: none"> Always wash at critical moments, i.e., after going to the bathroom, contacting feces, and before eating, feeding or cooking. 	<p>example of Tippy Tap in Chapter 8, Technologies or Products).</p> <ul style="list-style-type: none"> In order of preference, people should use manufactured soap, homemade soap, ashes or clean sand, or appropriate local plants as cleansing agents. Because mothers cannot be expected to wash hands 20 or more times a day, programs should carefully observe families before developing recommendations. It may be necessary to start with negotiating proper washing after defecation and then add other critical moments to wash.
Prepare and store food safely (this behavior is not emphasized in this manual, but may be important locally).	<ul style="list-style-type: none"> Always peel or wash fresh food before eating. Always heat or reheat cooked foods at a high temperature shortly before eating. Wash food preparation surface with soap and water. Never consume animal products that have been improperly stored or insufficiently prepared for consumption. Keep flies off food. 	<ul style="list-style-type: none"> Lack of time, fuel, soap, or water, or people eating far from home, may prove to be major barriers to these protective behaviors.

The ideal behaviors will be similar to those recommendations found in the Community IMCI list of key family practices, EHP’s Guidelines for Assessing Hygiene Improvement at Household and Community Levels, or UNICEF’s Facts for Life.

2. Break down each ideal behavior into *ESSENTIAL ACTIONS* or sub-behaviors. For example, for “Wash hands with soap at critical times,” the sub-behaviors might be, at key times:

- Obtain water and soap or other cleansing agent
- Establish a convenient and appropriate place for family handwashing
- Wash hands at critical times using soap or another cleansing agent as well as water
- Rub hands, especially fingers, at least three times
- Rinse hands
- Air dry hands or dry them with a clean cloth

Essential Hygiene Actions and Sub-Behaviors as Defined in the Hato Mayor Project, Dominican Republic

- Drink safe (treated and protected) water. Add the correct amount of chlorine to drinking water. Draw it from the container in a way that avoids contamination or use a container with a built-in tap. Keep the container covered. Wash the container every three days with detergent and a soft cloth.
- Teach every child age three and older how to use a latrine correctly. Accompany them to the latrine until they feel confident.
- All household members, except children under three years of age, use the latrine, day and night. Make a latrine available and keep the path to the latrine clean, dry and accessible.
- Children under three use a potty. The mother disposes of the fecal matter in a latrine. She correctly washes the potty. She teaches the child to know when s/he needs to go to the bathroom and to use the potty for that purpose. She cleans the child using toilet paper.
- All household members wash their hands. They use soap and water and dry hands with a clean cloth. They do this after defecating and using the latrine and before eating. Parents make sure that their children wash their hands or help them do so.
- Mothers wash their hands with soap and water after cleaning the baby, after changing the baby's diaper and before preparing or serving food. Mothers wash their hands with soap and water and dry them with a clean cloth.
- Families that lack a sink or wash basin get one. The sink has a jar or gallon jug containing clean water, a basin, soap in a soap dish, and a towel or clean cloth hanging on a hook.
- Clean the latrine with detergent weekly. Clean the latrine path as needed. Add lime periodically to compost latrines.

Adapted from EHP Activity Report 120, "Combining Hygiene Behavior Change with Water and Sanitation: Monitoring Progress in Hato Mayor, Dominican Republic," Page 28.

3. Discover the gaps between current behaviors and people carrying out essential actions.

- Review existing information on current practices from previous research and programs
- Gather new information on current practices from participant groups in the program area

Identifying and focusing on specific gaps allows program planners to address the need for specific improvements. For example, mothers who rinse their hands with water and rub well after cleaning a child who has defecated, yet do not use a cleansing agent for handwashing, present a particular set of challenges. Mothers who do not even rinse their hands after cleaning a child would have to be addressed differently.

4. For each gap discovered, identify and test *POSSIBLE SOLUTIONS*. For example, to address the problem of mothers who do not use soap to wash their hands after cleaning a child who has defecated, program staff may work with mothers to learn the degree to which various cleansing agents (purchased soap, homemade soap, ashes, sand, mud or certain plants) are affordable, acceptable and available to them.

In a particular context, program staff and even mothers may prefer soap, but some or most families may not be able to afford it for washing hands. Instead, these families may accept ash as an alternative. In another setting, it may be possible to work with local shops to stock more affordable soaps or, where community members have some management skills and ongoing support from an outside organization, to set up a community-revolving fund for this purpose.

It is essential that the process of defining feasible solutions be based on consultation with the program participants themselves. After all, most people practice their behaviors for reasons that make sense to them. Therefore, simply being told that another behavior is better, or even ideal, is often not particularly meaningful or useful.

Testing solutions with participant groups in trials of improved practices (TIPs) helps program planners understand which solutions are feasible. Again, feasible solutions are those where most people are both willing and able to take actions in their actual situations, if the program can effectively motivate and facilitate these actions.

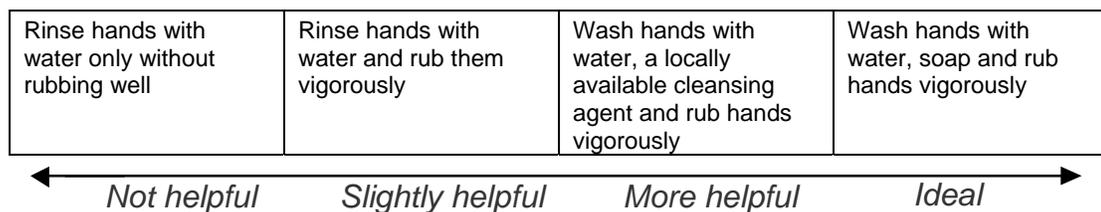
5. The behaviors and essential actions that will make a difference to the health problem and that people are both willing and able to do become the *PROGRAM RECOMMENDATIONS*.

Technical experts can determine the best ways to solve a health problem based on the local disease epidemiology and scientific literature. However, help from participant groups themselves during consultative research is needed to determine which behaviors are actually feasible. (This guide uses the term “participant group” rather than “target group” or “audience segment” to emphasize that people are not passive recipients but active participants in defining and implementing program activities.) Therefore, a strong partnership is needed to determine the most effective program recommendations.

Behavior change strategies are designed for each participant group. Program planners use information about barriers and motivations or other supports for each feasible behavior to select sets of activities that will directly affect the feasible behaviors. In doing this, they should consider the whole range of activities that will directly impact these behaviors. While all program (or community) activities fall within the Hygiene Improvement Framework (HIF), in BCP they are normally categorized not by the HIF box but instead by defining major program actions such as precise communications, community (or collective) action, training, improved service delivery, new or improved products or technologies, infrastructure and policy change (see Chapter 7 for strategy formulation).

Does Everyone Have to Do the Same Behaviors?

As indicated above, programs should not expect everyone to practice precisely the same behaviors. Thus, while everyone should have clean hands before handling food and after contact with feces, exactly how people do this may vary because of personal preferences, social influences and other factors. In many cases, real constraints such as poverty and poor access to water or key technologies will result in some families being unable to move as close to ideal behaviors as others, unless the program facilitates access to technologies or improves their economic well-being. Ultimately, the program's challenge is to support each family in moving as far as possible towards the best and safest practices that are feasible. While considering which program recommendations to emphasize, it is helpful to arrange the possibilities in a continuum from less desirable to more desirable.

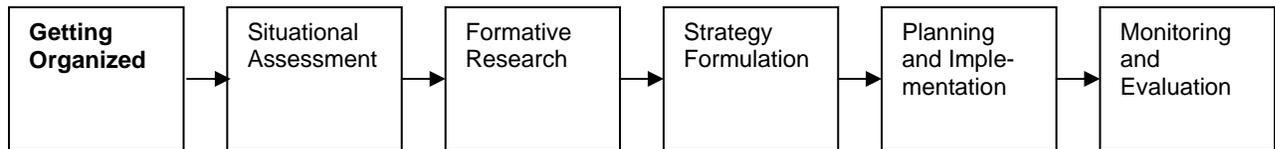


Using mass media, a program may well promote the ideal practice and sub-behaviors that are feasible for at least some of the population. However, negotiation of the best feasible improvement for that person or family should be done through individualized counseling. Over time, the counseling may continue to move the person or family “to the right” until the ideal situation is reached. Of course, negotiating behavior changes that will have **no** health impact should not be attempted.

Behavior-Centered ProgrammingSM

- BCP begins with a thorough review of existing information and lessons, followed by formative research to learn current practices and their determinants, feasible practices, and barriers as well as supports.
- The strategy is comprehensive (it considers the entire Hygiene Improvement Framework), focusing on actions that have been tested with and partially designed by the community to address the “resistances” and obstacles.
- Concepts are tested based on the motivations revealed in the initial formative research.
- Behaviors are tested for feasibility in Trials of Improved Practices (TIPs). When possible, alternative behaviors are offered and negotiated with individual families.
- Comprehensive behavior change activities are implemented, because it is understood that communication alone is rarely enough to effect real change.
- Materials are created on the basis of a good understanding of the lifestyle, behaviors, assets, motivations and barriers of the audiences. When possible, communities have direct input into characters and icons used and the visual context of the materials.
- Baseline data are collected after formative research and a focus on the specific behaviors and major barriers are identified.
- If there is a formal program launch, it is aimed at informing and motivating all program participants and thus includes local community activities.
- There is follow-up at key points during the implementation process to assess and adjust the implementation as needed.
- Considerable emphasis is given to training community volunteers in counseling and negotiation.
- In-depth, focused monitoring occurs several times during implementation and findings are used to modify program activities.
- The evaluation allows program managers to understand the implementation process and the impact of program actions on behaviors and their determinants.

3. Getting Organized



To get off to a good start, program organizers may find the following steps helpful:

1. Establish a project or management team
2. Identify and engage partners
3. Meet with the team and partners to clarify roles and expectations
4. Agree on a plan of action with a timeline

As early as possible in the life of a project or program, the single or multiple organizations undertaking the effort should clearly establish the organizational basis for the project.

- What is the funding or personnel contribution of each organization?
- How will that organizational commitment be defined and assured over time (particularly in the case of staff turnover)?
- If there will be collaboration among various partners, how will they communicate with each other and divide tasks?
- How often will they meet?
- What resources will they commit to the project?
- What is the legal and organizational framework that will guide their participation in the project? This is especially important for government staff, who may need a clear mandate from their superiors in order to devote any resources to the project.

Such issues should be resolved at least tentatively before a project team is established, so that the commitment of the team will be based on an institutional compromise rather than solely on the commitment of individuals.

Establish a Project Team

Except in the smallest projects, managing hygiene promotion planning and activities is more than one person can adequately handle, so it is usually desirable to designate a team of people. To the extent possible, one or more team members should have familiarity with:

- Environmental health
- Child health
- Qualitative & quantitative research & analysis
- Strategy and program design
- Communications/material development
- Training
- Monitoring and evaluation
- Program management and administration

Following is an example of a team skills matrix.

TEAM SKILLS							
Team Members	Program Management	Finance	Research	Communica-tions	Training	Evaluation	Other
Juan Gonzalez	X	X			X	X	Child health
Gloria Sanchez	X	X			X	X	
Alicia Mayorga		X					Child health
Rafael Saenz			X	X		X	Environmental health
Juan Tejada			X	X		X	Child health and environmental health
Miguel Torres			X			X	Child health

Hold an initial meeting with the project team members to:

- Discuss and decide on responsibilities for each team member
- Discuss the (diarrheal disease) problem to be addressed and the proposed process
- Determine how the team will be organized and how decisions will be made
- Agree on team members' time commitment to this activity

Identify and Engage Partners

Identify and meet with partner organizations that could collaborate. Although coordinating with various partners is more time-consuming than working alone, it also has many advantages. Partners bring a variety of skills and resources, are able to reach different groups in a community and offer a greater likelihood of sustainability. The two key periods to inform partners and solicit their ideas and collaboration are at the beginning of the planning phase and at the time of strategy formulation. Possible partners include:

- Government ministries (ministry of health, water authority, ministry of planning, etc.)
- Private voluntary organizations (PVOs) and non-governmental organizations (NGOs)
- Community-based organizations (CBOs)
- Academic institutions
- Religious organizations
- International agencies and donors (e.g., UNICEF, WHO)
- Service groups (e.g., Rotary clubs)
- Foundations and trusts
- National and international associations
- Media
- Private industry
- Other groups that have worked to reduce diarrheal disease

Government involvement can provide credibility and strengthen implementation by offering access to government resources and promoting the project through existing public health networks. The private commercial sector often has the capability of providing necessary products, an efficient distribution system, and advertising.

Meet with the Project Team and Partners

Bring the project team and partners together to introduce plans for the new activity. Agenda items for that initial meeting might include the following:

- Review current information about diarrheal disease and related current practices in the project area.
- Discuss plans for consultative research to fill in any gaps in understanding and to go further in-depth into all areas.

- Inquire about partners' interests in participating in research, strategy formulation and implementation.
- Describe the organization of the management team and the responsibilities of each member.
- Determine how decisions will be made and how and when the partners will be involved.
- Discuss how often partners would like updates, in what form, and how they would prefer to receive them.

Consider the following ideas to nurture good relationships with partners:

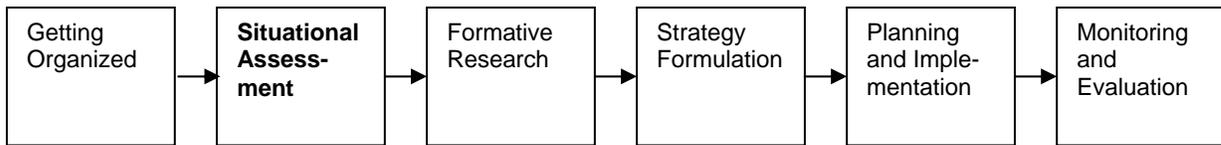
- Update partners periodically.
- Encourage feedback and suggestions.
- Be extremely clear in communications to prevent misunderstandings.
- Avoid too many meetings, too much information, or setting unrealistic expectations.
- Anticipate redirection: be willing to mutually adjust earlier agreements.

Agree on a Plan of Action and Timeline

The project team should develop a general plan of action and timeline – i.e., just the main phases anticipated and their timing – and present it for discussion with the primary partners. This plan will have more detail on the early steps of the process, since implementation itself should not be planned until the results of research and stakeholder consultation are available.

Parts of this chapter were adapted from CDCynergy (Centers for Disease Control).

4. Situational Assessment



When designing a new program or attempting to improve an existing program, planners should start by reviewing what is already known and what has already been done in the project area. A variety of information on hygiene improvement may already be available from past surveys, reports or experts in the field. Use a wide range of sources to get the information to make decisions on next steps. This review can not only provide key information for planning, but also reduce the amount of new research needed by helping focus it on unanswered questions.

Activities related to the review are summarized in the Task Box. This phase should produce a brief background document that:

- identifies key hygiene improvement problems specifically related to diarrheal disease, when and where they occur, why they occur, and what information gaps exist
- provides a baseline for comparison with the new information that will be collected during field activities
- makes initial recommendations about the program focus and specifically about the research design and analysis

Task Box for Situational Assessment	
Preparation Tasks	
Define objectives.	Who is the program for, what will it try to achieve, what outcomes are expected?
List essential hygiene practices and enabling factors.	Hygiene practices, handwashing practices, disposal of feces, water collection and handling, water use and treatment.
Identify sources of information.	Surveys; qualitative and quantitative studies; national and regional data; local experts; program documents.
Implementation Tasks	
Obtain and review materials.	Review published and unpublished documents that provide information on hygiene improvement related to diarrheal disease in the program areas.
Conduct key informant interviews.	Interview a few people who have special knowledge about these topics.
Analysis and Documentation Tasks	
Summarize the findings.	Group all that is known on each particular issue or question.
Fill in situational assessment table.	Note what is known about practices, problems, motivations, and constraints in the appropriate columns.
Do gap analysis for current practices.	Examine what is known about current practices and identify what additional information is needed.
Write a summary document.	Include summaries of existing information, gaps identified in the worksheets, guidelines on what issues the consultative research needs to address.

Depending on the size and scope of the program and on your resources, these tasks should take one to three weeks.

Prepare for the Review

Define the Program Scope and Objectives

It is important at this point to specify the overall program objectives. Doing so should help determine the topics and documents to be reviewed and the kinds of individuals to be interviewed. The program objectives may reflect political and funding constraints as well as public health priorities. For example, they may or may not include case management of diarrhea or improving food hygiene practices, depending on the circumstances. Consider the following questions and examples when developing or clarifying objectives:

Whom will the program reach?

For hygiene improvement, young children and their caretakers are the chief beneficiaries. Diarrheal-disease prevention usually targets low-income families.

What issues or practices will be the focus?

The focus will be on the essential hygiene practices and their associated sub-behaviors; however, to facilitate more healthful behaviors, many types of program inputs may be needed.

Where will the program operate?

This is related to the *who* question and usually is defined geographically according to public health need and socioeconomic status.

How are essential hygiene practices likely to be addressed?

Although answering this question is one of the main purposes of the research, it is often possible to say something even at the research planning stage about the types of actions that are likely to be within the scope of the program. For example:

- Is the program broad enough to handle a variety of activities (e.g., advocacy, facilitating hygiene products, infrastructure development), or is it focused primarily on hygiene education?
- Will promotion of latrine building and water-source improvements be considered? Is the program willing and able to include communities that have poor access to sufficient water needed for basic family needs?
- Is there an existing cadre of health workers or community volunteers that might be trained as hygiene promoters? If not, is your program willing to create and support such a group?

List Relevant Topics for the Review

Making a topic list will help to sort the information and ensure that sources for each topic area are identified. The following general topics are suggested:

- Epidemiology of diarrheal diseases
- Hygiene infrastructure
- Past and current program experiences
- Partners
- Possible channels for activities
- Concepts, practices, beliefs, attitudes and perceptions related to hygiene
- Provider skills, knowledge and attitudes
- Current practices
- Local resources

More detailed topics are found in the report outline later in this chapter.

Identify Sources of Information

Potential sources of information on hygiene and diarrhea include:

- Most recent Demographic and Health Surveys
- Ministry of Health and water-agency statistics and reports
- WHO, UNICEF, USAID data
- NGOs, PVOs, other groups or organizations that have worked on diarrheal diseases in the project area
- University publications and dissertations
- Environmental and child health surveys

International and national organizations that fund hygiene research may be able to provide relevant reports or access to their libraries. Demographic and Health Surveys are good sources of up-to-date demographic information and usually include data on hygiene-related practices. National environmental health surveys may have been conducted in some countries, or hygiene data may have been collected as part of other large surveys. Regional surveys also may be useful. Qualitative or anthropological studies may provide detailed information on hygiene practices and, ideally, their determinants.

Sources of information on health services, water infrastructure and programs, communications programs and media may include:

- Formative or evaluation research from other health programs
- Private voluntary organizations, UNICEF and WHO, bilateral organizations
- Local market research and advertising agencies
- Radio and television stations and media surveys
- Several divisions of the ministry of health (at the geographical level of the project) and water agencies
- Groups working in non-formal and adult education programs

Conduct the Review of Existing Information

Obtain and Review Materials

Begin with documents, people and organizations that you know and build from there. Read each document (or its relevant sections) and take notes on the key points related to the topics of interest. Be certain to get complete and correct reference information

at the start (i.e., title, author, volume, date, where the document was obtained or published).

It is helpful to record notes on each topic on separate sheets of paper so that they can be sorted and grouped in different ways for analysis. This is especially important if more than one person conducts the review. Review the worksheets and the report outline included in later sections of this chapter for ideas on how to organize review notes.

Conduct Key Informant Interviews

Interview knowledgeable individuals to supplement and explain the information that is gathered during the literature review. Key informants also can report on “common knowledge” – i.e., issues and practices that may not be written down. If time and resources are limited, choose a minimum of four individuals who are local experts in environmental and child health.

Types of individuals to interview include:

- MOH environmental health staff at national and district levels
- NGO, PVO, CBO health staff
- Communications and behavior-change specialists from other health programs (HIV/AIDS or infectious disease programs)
- MOH directors of primary health care at national and district levels

Key informant interviews should be structured – so you have a clear sense of the information you need to obtain – but at the same time open-ended, so that respondents are free to tell stories and introduce new topics. To focus the discussion, prepare a list of the subject areas to be covered in the background document. Keep detailed notes of the interviews or tape record them (with permission) and write notes later.

Analyze and Write up the Review

Summarize by Theme or Question

The review is most useful if it is well organized and brief. Organize notes or summary sheets into piles for each topic of interest, highlighting the points that are widely agreed upon, those that are controversial, and those about which little is known. Note the patterns or general trends and any significant exceptions to these patterns.

The information from written reports and interviews can be combined, but it is important to indicate the sources of the findings. For example, a single key informant's opinion may carry less weight than the results of a national survey. Generally, opinions expressed by key informants are very useful for suggesting issues

and practices to ask about in the research, but should not be taken as fact without confirmation from other sources.

Summarize Background Information

Below are many of the questions that the review of existing information may answer. It is not likely that you will find answers to all these questions.

Describe diarrheal disease problems in young children.

- What is the prevalence of diarrhea among children under 5 (or 3) (the standard measure is diarrhea in the past two weeks)?
- What children are most affected by diarrheal diseases? What age groups? What cultural groups? In what geographical or ecological areas?
- In what season do most cases of diarrhea occur?
- What kind(s) of diarrhea occur (acute or persistent)?
- What are the most important causes of diarrhea in young children?
- What is known or believed about transmission routes?

Describe hygiene infrastructure in the program area.

- How many and what types of families have latrines and other sanitary disposal technologies?
- How well are latrines functioning – are some unused because they are full, flooded, full of vermin, etc.?
- Where do families obtain water? Who brings it to the home and how?
- What is known about water quality?
- What is known about families' access to water, including the quantities available by season?
- How many communities have water systems?
- Do these systems provide regular, continual water supplies?
- To what extent are communities themselves managing their water systems?
- How many households pay for water? How much do they pay?
- What household water-storage technologies do families use?
- How available and affordable are soap and soap substitutes?

Examine past and current efforts to improve hygiene or communicate information about hygiene practices.

- What have been the strategies, experiences and effectiveness of previous programs (governmental and NGO) to improve hygiene behaviors?
- What are the strategies, experiences and effectiveness of current programs (governmental and NGO) to improve hygiene behaviors.?
- Do community water or sanitation committees exist, and if so, how active and effective are they, who participates, etc.?
- What individuals, services and media might influence hygiene practices?
- What media have been used and with what impact?
- What educational messages are being communicated?
- What lessons have been learned?
- How relevant, well-done and effective are existing manuals, training materials and communication materials?

Describe relevant policies and potential partners.

- What are the official government policies towards access to water and safe sanitary solutions?
- What partners could be included in program design, implementation and monitoring – including governmental and non-governmental organizations as well as community partners (groups and leaders)?
- What groups are already interested in, committed to and/or working in hygiene promotion?

Describe the channels through which services and educational programs could be delivered.

- What support for hygiene infrastructure, technologies and education for diarrheal prevention is provided by government health staff, NGOs, and private or traditional providers?
- What types of trained health personnel and community agents are available and where? What are their responsibilities?
- What staff and mechanisms exist for community-level outreach and education?
- What traditional or non-formal information systems, such as mothers' clubs, literacy programs or folk theater, could be used?
- What is the coverage, cost and potential effectiveness of radio and other media, festivals and local markets, schools, community-level volunteers and organizations, artists and others that may be able to contribute to program activities?
- Whom do mothers trust for advice on hygiene?
- What roles do community groups play in hygiene?
- What are literacy levels among likely participant groups?

Describe mothers' and other family members' concepts, practices, beliefs and attitudes regarding handwashing, feces disposal and water handling and use.

- To what extent do families with access to water and feces disposal infrastructure use it and, if they do, to what extent do they use this infrastructure correctly?
- What are the reasons for under-use?
- What are current beliefs about causes of diarrhea, concepts of cleanliness, water, feces, etc., and how strongly are they held? Which will be most difficult to change?
- What are families' concepts of water, including types of water (from different sources) and their use?
- What are families' concepts of feces and their disposal, including types of feces (child vs. adult)?
- What are current hygiene practices and how are they likely to affect diarrhea prevalence?
- What are the reasons for current practices and possible constraints to and motivations for changing behavior?
- What, if anything, is known about families' willingness to pay for and maintain safe water sources?
- What population groups seem to differ greatly in hygiene practices, how and why?
- Are there important differences in rural and urban hygiene practices in this area?
- Are there important religious and/or ethnic differences? (In the Peru pilot hygiene project, speaking Spanish or the indigenous language differentiates groups in the Cusco area).
- Do practices vary by region or climate (i.e., coastal, desert, forest)?
- What could motivate changes in behavior?
- What beliefs or external constraints could prevent improvements in hygiene practices?
- What are prevailing attitudes about children (by gender, if important) and parenting?
- Who is responsible for obtaining, handling and using water?
- Who in the family makes decisions on purchases?
- Who, if anyone, takes steps to keep feces out of the family environment?
- What is known about home treatment and care-seeking for diarrhea?

Describe health care providers' knowledge, attitudes, and skills related to hygiene practices.

- What are providers' practices related to treating diarrhea, counseling parents on good hygiene, recommendations for preventing diarrhea in communities?
- Do government workers or community health volunteers provide counseling? Do they have time? Do they have the skills and motivation for counseling and negotiation?
- Do they have materials or job aids?
- Are there traditional or non-formal practitioners who could provide counseling?
- What misconceptions about hygiene practices are common among health care providers?

Summarize Current Practices

A primary objective of the review is to pull together what is known about hygiene practices and determinants of those practices. The situational assessment table at the end of this chapter is designed to help to summarize these issues. Usually, it is not possible to fill in all the spaces on the table from the review. Nevertheless, filling in the table does help summarize existing information and show where there is a lack of information and a need for further study.

<p>List the sub-behaviors for each essential hygiene practice.</p> <ul style="list-style-type: none">• Write the sub-behaviors in the first column of the worksheet.• These should come directly from the worksheet completed in the section on Focus on Behaviors.
<p>Describe current practices according to each sub-behavior.</p> <ul style="list-style-type: none">• Write the current practices for each sub-behavior in the second column of the worksheet. (Add any information on practices when working in the fields.)• What are handwashing practices?• What are feces disposal practices?• What are water-handling and storage practices?• What, if any, water treatment is done?• What locally available and affordable cleansing agents are available and/or used?
<p>Describe the extent to which each sub-behavior is already being practiced and how.</p> <ul style="list-style-type: none">• For each sub-behavior, write “Most,” “Many,” “Few” or “Unknown” in the third column.
<p>Consider what questions remain.</p> <ul style="list-style-type: none">• In the fourth column, list any and all questions that remain about how many people practice or do not practice the essential action, why or why not, and what could be feasible for them to do to alter the situation.• This mini-analysis of current practices will guide the formative research process in the next phase. The research can focus on those sub-behaviors that currently are not being practiced or practiced effectively, or those that are unknown. This will save time and energy by eliminating those sub-behaviors that are already practiced and are not seen as problems.

Draft the Report

The written report is a summary of existing information. As such, it should summarize the important themes revealed by the review of existing information, indicate what additional information should be collected, and list the remaining questions that have been revealed. It should also include the completed tables that have been prepared to summarize the information.

This document should describe the categories specified in the situational assessment worksheets.

Worksheet: Situational Assessment – Practices

Essential Hygiene Practice:

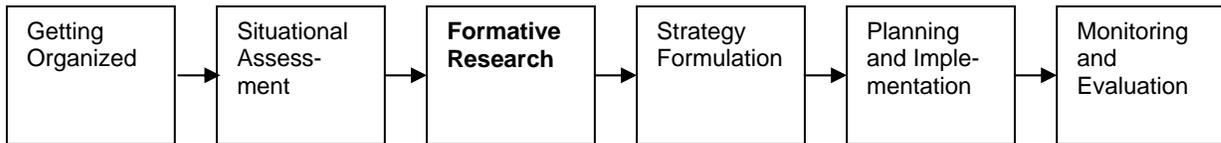
EXISTING INFORMATION ON PRACTICES		ANALYSIS	
Sub-Behaviors	Current Practices	Is This Sub-Behavior Practiced? ["Yes" – most people do it, "No" – few people do it, or "Unknown"]	Remaining Questions

Worksheet: Situational Assessment – Practices

Essential Hygiene Practice: Wash hands with soap and water after defecation or after handling children’s feces

EXISTING INFORMATION ON PRACTICES		ANALYSIS	
Sub-Behaviors	Current Practices	Is This Sub-Behavior Practiced?	Remaining Questions
		["Yes" – most or many people do it, "No" – few people do it, or "Unknown"]	
Rinse hands with clean water after defecation	People always rinse their hands after defecation, often using the same pot as everyone else	It would be better to pour water over people's hands or to use unused water for dipping	Would people be willing and able to pour water over hands or to use unused water for dipping? Is there enough water? What would make this appealing to people? What would make it difficult?
Rub with soap or an acceptable soap substitute	Few people use any cleansing agent	No – few do this	What kind of cleansing agent may be feasible (available and acceptable)?
Rub at least 3 times	People generally rub three times	Yes - most do this	–
Rinse with water	People do rinse with water	Yes - most do this	–
Dry on a clean cloth or in the air (i.e., avoid drying on potentially contaminated cloth or clothes)	People dry their hands in the air before eating	Yes - most do this	–

5. Formative Research



Chapters 5 and 6 provide guidance on planning and managing formative research. However, they are not intended to teach all of the specific skills needed by research specialists, moderators and interviewers.

Formative Research

After program planners have gathered and examined existing information about essential hygiene (or other key family) practices, they usually need to gather additional information. This phase of the process is known as formative research. It is a primarily qualitative information-gathering process that clarifies current behaviors and that enables planners to identify and explore the key barriers to and meaningful motivations for improved behaviors.

Formative research is a type of *consultative research* that is done in the beginning of the program to “form” (plan) it. Consultative research, which also includes pretesting and monitoring, is used throughout the entire program cycle to provide information that can be used to plan and improve program actions.

By providing periodic opportunities for families, communities, and other groups involved to offer their opinions and insights, technical specialists may avoid the mistakes resulting from implementing technically sound but not necessarily feasible solutions.

When Is It Done?

Formative research should be done to support planning **after** the review of existing information has been completed and before the design of a quantitative (KAP) baseline survey. The baseline survey will then be better able to measure the specific essential hygiene practices and feasible sub-behaviors the program will promote and facilitate, as well as the key barriers and supports for change on which the program will focus (see the discussion of the timing of the baseline in Chapter 9).

Why Is It Done?

The purpose of formative research is to provide a solid basis for effective program actions. It enables planners to consult sufficiently with participant groups before implementation to reduce the possibility of negative feedback after the program actions are already under way. In Behavior-Centered ProgrammingSM, formative research builds a growing understanding of:

- current practices and the reasons for them
- what feasible improvements in practices people can make
- obstacles to as well as motivations for improved practices
- skills and resources available to reduce barriers and to focus attention on the motivations

In other words, this research helps reveal how best to promote and facilitate the accomplishment of improved (more health-promoting) practices (see an example in the box below).

How Findings Informed a School Health Program in Malawi

In-depth interviews for a school health program in Malawi found that pupils wanted to use latrines only when they had diarrhea because they believed that this would protect others from diarrhea. Also, normally, they preferred to use the “bush,” where they could get leaves or other materials to clean themselves. (There were no cleaning materials in the latrines.) Thus, to promote the objective of consistent use of latrines, the program had to address the incorrect perception that only diarrhea, but not normal feces, would spread disease; and to address the need for cleansing materials in school latrines, since the lack of cleaning material was discouraging latrine use.

The same study found that because health workers normally distributed chlorine only after a cholera outbreak had begun, many people believed that chlorine was a kind of medicine placed in the water to cure cholera. This perception was clearly a barrier that needed to be addressed.

Without such insights from consultation with participant groups, program planners would likely have been ignorant of key factors that affected behavior and health impact in that area.

How Is It Done?

Formative research may consist of up to three phases:

- exploratory research (in-depth interviews, observations, and possibly focus group discussions or FGDs)
- behavioral trials (TIPs, which consist of two or more interviews and observations in the same households)
- checking research (often through FGDs)

Although this chapter and Chapter 6 describe a series of steps and methods for initiating formative research, only some tools will be necessary in a particular

program situation (see the example in the box below). The amount of information-gathering should be governed both by technical considerations – the number and nature of unanswered questions after reviewing the existing information – and by practical considerations – how much money, time and trained human resources are available. Any formative research – even “quick and dirty” research – is usually better than none. Pragmatic compromises can and should be made. In some cases, one may skip the “exploratory” research phase and move directly from reviewing existing information into behavioral trials (TIPs). Checking research is optional, and if carried out, should not take more than a few days.

Flexibility

In a recent project in Ghana, the review of existing information revealed that a great deal was already known about the program issues; so instead of doing formative research, the project developed draft materials and then thoroughly pre-tested both the materials and the messages for communication attributes as well as for acceptability and feasibility.

Preparatory Tasks

Decide How the Activity Will Be Managed

The project manager and/or management team should decide who will plan, manage, carry out and write up the findings. Planning and managing this phase may be done by a team comprised of:

- staff members from the implementing organization
- staff members of the implementing organization, supplemented by consultants
- an outside organization with appropriate experience that is contracted by the implementing organization. In this case, the project manager and/or management team should carefully monitor and approve the work in progress, and the research coordinator from the contractor should participate in the strategy formulation based on the research findings

In large-scale programs, a research team should be responsible for planning, supervising and analyzing the findings. Ideally, all team members will participate in all aspects of the information-gathering process (planning, training, interviewing, observation, analysis and report writing). The team should include:

- a coordinator whose primary responsibilities are planning, managing and supervising the research staff, preparing and following the research plan and protocols during implementation, and analyzing the results
- an environmental health specialist who helps analyze hygiene information and develop appropriate recommendations

- other experts on the methods or topics in question, who assist as needed

Early recruitment of the technical resource persons is critical, so they can be involved in decisions on design, sampling and question guides. If the scope of the project is limited so that only one or two people function as field supervisors, hiring them early in the process allows them to participate fully in the planning process.

The research team should be capable of using all the methods planned, be willing to stay for extended periods in the communities, and be able to participate until the activity is completed. Ideally, some members of the team will also be involved in planning the program that is based upon the research findings.

Individuals with some training in environmental health and/or the social sciences are ideal candidates for team membership. The team also should include at least one person who is knowledgeable and experienced in community health programs.

The box below lists desirable skills and experience for both the program and field teams. Expertise that is lacking can be obtained by consulting with local experts, such as communications specialists or anthropologists.

Desirable Skills and Experience for a Research Team

Respect for the perspective of potential program participants and willingness to learn from the participants are essential attitudes for all team members. In addition, at least some members should have:

- Experience with qualitative methods and analysis
- Program experience and an orientation toward community development
- Technical expertise in environmental health
- Financial, logistical and personnel management skills
- Good writing skills
- Supervisory skills for field activities
- A democratic working style, i.e., a willingness to listen to the interviewees and learn about the results of the fieldwork
- Familiarity with local languages and cultures

There are several options in the selection of interviewers and note-takers that will make up the field team. Interviewers may be government or NGO program staff who are on leave from their regular duties, or they may be short-term employees (university students or others).

There are advantages to having health staff conduct fieldwork. In addition to learning a great deal about the research topic, they often gain a strong, new appreciation for valuable information and ideas that mothers and other members of the public can contribute to designing more effective programs. There are disadvantages as well:

First, it may be difficult or impossible for health staff to leave their regular work for the required time period. And second, their presence can introduce bias into the results because respondents may be more likely to give “correct” rather than honest answers, and if not well coached in advance, health workers may react positively or negatively to the answers given. So to avoid biasing responses, health staff should not conduct research in the same communities that they serve. They should not wear uniforms, and they (or any interviewers) should not give verbal or non-verbal indications of approval or disapproval of any of the responses they receive during the course of their interviews.

The best alternatives to health staff are secondary or university students (ideally studying the social sciences) or professional interviewers from an organization or company that routinely carries out research.

Irrespective of the background of potential interviewers, some important qualities to look for in members of the team are summarized in the following box:

<p>Characteristics to Look for in the Field Team</p> <ul style="list-style-type: none">• Fluency in the local language(s)• Ability to establish rapport with strangers, converse naturally and put people at ease so that they can express themselves freely• Ability to observe and record situations without judging or distorting responses• Empathy with the type of people who will be interviewed• Sufficient maturity to handle difficult situations that may arise during fieldwork• Comfort in discussing personal hygiene, child illness and child care. (While men and women are potential team candidates, women may be more at ease when talking with women about these issues.)• Previous field research experience• Willingness to live and work in the study communities during the research period• Clearly defined time commitment from the team member and his/her organization (perhaps a written commitment)• Ability to analyze a situation, to think and act independently and to write clearly• Some technical knowledge of the subject topic (If this is lacking, a technical orientation should be a focus of training and supervision.)

Regardless of who constitutes the field team, its members will need training that at a minimum includes:

- A description of the problem the program is addressing
- A review of diarrheal disease epidemiology and transmission routes
- The overall program development and implementation work plan
- The research plan (methods, sampling scheme, organization, schedule)

- The individual methods and instruments to be used (all of which should be pre-tested before or during training, as well as used during the training period)
- Desirable (and undesirable) practices in qualitative interviewing and observing
- Detailed logistical plans for the work planned
- Plans for ongoing and end-of-fieldwork analysis

If it is anticipated that the research will have two or more phases, it is recommended that there be a longer initial training (normally around five days, but longer or shorter depending on the team's experience), followed by a shorter training session before each subsequent phase to review plans and to practice for the upcoming work. If possible, train more field workers than needed and select only the most enthusiastic and effective ones to do the actual field work.

As researchers develop their plans, they should consider logistical and staff needs and the resources available. These considerations will help to determine how extensive the plan will be. Programs staff should draft a budget for the planned research and make adjustments in plans if necessary (see sample budget in Chapter 6).

Prepare an Information-Gathering Plan

The research team should prepare a plan that includes proposed methods; the sampling plan; research instruments; plans for supervision and other quality-assurance steps; procedures for selecting communities, individuals and families; the analysis plan; and steps in preparing the summary report. In doing this, they may find it useful to fill out a “Formative Research Planning Table” (below) as the planning proceeds. The sections are described below.

a. “Essential Hygiene Practice”

Fill out one planning table for each ideal family practice that the program will address. The statement should explain various aspects of this ideal practice including answering the questions: who, what, when and how.

b. “Key sub-behaviors that may pose problems”

List the sub-behaviors (essential actions) identified in the situational assessment worksheet on current practices that are not being practiced now or are that are unknown.

- For example, one sub-behavior to handwashing may be to wash hands with soap or an acceptable soap substitute.

c. “Current practices”

For each essential action in the first column, note in the second column what is known about the related current practices. For example, current practices around

handwashing might be that most mothers rinse hands with water after cleaning a young child who has defecated, but do not use a cleansing agent.

d. “Research objectives”

Researchers should clearly spell out the objectives of the information-gathering to help identify the direction that the research will take and the populations to be reached. Research objectives should:

- Cover different aspects of the problem and contributing factors in a coherent and logical sequence
- Be clearly phrased in operational terms, specifying exactly what is to be done and for what purpose
- Be realistic, considering local conditions
- Use action verbs that are specific enough to be evaluated

Examples of research objectives that might be generated to explore handwashing practices might be:

- To determine the current hygiene practices related to handwashing, disposal of feces and water handling of people in the adult population; the problems that impede safer hygiene practices, as well as the motivations for those hygiene practices; and the improved hygiene practices that can be feasibly implemented by that population
- To investigate the relationship between the concepts of health and cleanliness as they influence hygiene practices related to handwashing, disposal of feces and water handling

e. “Guiding questions”

For each of the research questions, the team should generate “guiding questions” that can be used to probe further into the determinants of behavior. Sample guiding questions for the second research objective above might include:

- “How do people (i.e., mothers, fathers, other caregivers of young children) define cleanliness?”
- “What relationship, if any, do people (i.e., mothers, fathers, other caregivers of young children) see between feces and disease?”
- “How do people (i.e., mothers, fathers, other caregivers of young children) define diarrhea?”
- “What do people (i.e., mothers, fathers, other caregivers of young children) believe about the causes of diarrhea?”

f. “Specific questions”

For each of the guiding questions, the team should create specific questions to probe more precisely into the motivations surrounding particular practices, as well as the obstacles to other practices. Examples might include:

- “How do people perceive feces?”
- “How do people perceive adult feces?”
- “How do people perceive child feces?”

Note: An interviewer should be able to link answers given by a respondent to that same respondent’s earlier answers so that a more complete picture of his or her beliefs and attitudes may be obtained. For example, the interviewer might be expected to ask the respondent the following question: “You said earlier that you feel that your hands are clean when they look clean – i.e., when you see no dirt or stains. And you have just said that child feces can be dirty and can contain disease. If you help a child clean himself after he has defecated and your hands look clean, do you believe they are in fact clean?”

- g. “From whom and how?”

For each question, the team should list from whom the information should be gathered and how. These two elements will be filled in as participant groups are defined and research methods chosen.

Worksheet: Formative Research Planning Table

Ideal Behavior: _____

Key sub-behaviors that may pose problems	Current practices	Research objectives	Guiding questions	Specific questions	From whom and how?

The team should also assess if the existing information provides sufficient understanding of such basic cultural concepts as the meaning of water, feces, cleanliness, and purity; types of water (from different sources for different uses); as well as information on family dynamics (who purchases such items as soap, who obtains water, cooks, cleans, watches young children). If more insights are needed on these issues, carry out a few focus group discussions to clarify.

As the research proceeds, the team may find that it needs to change the information in the planning table. New questions may need to be added, and new populations may even be identified. The number of interviews may need to be increased or decreased, depending upon initial findings.

Based on a review of existing information, the team should determine the types of people of interest (participant groups). Select both primary participant groups – those of most interest – as well as secondary groups. Clearly, more representatives from the primary groups should participate in the research.

Participants Groups

Primary participant groups are those that are expected to do the essential hygiene behaviors and actions.

Secondary participant groups are those that are expected to most influence those in the primary group (positively or negatively).

These concepts may change based on information gained from the initial information-gathering. If this happens, research plans should be adjusted accordingly.

For research on preventing diarrheal disease in a particular context, the primary groups might be mothers and older female children who have child-care and cooking responsibilities (this will vary by program situation). Secondary groups might include fathers, grandmothers, community volunteers and community leaders. Some of the participant groups will need to be sub-divided into sub-categories, such as mothers of children of certain ages, those from families with or without a latrine, or persons from different ethnic or religious groups (if such groups may have different hygiene practices).

The second criterion for the selection of participants is geographic location. The communities in which research takes place should sufficiently represent urban and rural areas, areas near and far from the lake, desert and mountain areas, or whatever geographical zones are most relevant to the hygiene practices being studied.

However, defining too many sub-groups may result in an unwieldy number of interviews to conduct or analyze or for the program itself to address with distinct and targeted activities. In fact, it is rarely necessary to define more than two primary participant groups and three secondary ones.

Once the participant groups have been defined and special characteristics noted within each group, the team can then plan information-gathering methods. As described below, in-depth interviews and observations are generally the focus of the first (exploratory) phase, possibly accompanied by several focus groups around key concepts. The second phase, Trials of Improved Practices (TIPs), is likely to focus on mothers and others regularly involved in child care and domestic work. If checking research (the optional third phase) is needed, it usually consists of a small number of focus group discussions.

How Many?

In in-depth, qualitative research using a convenience sample, one carries out as few interviews and discussions as possible to cover the major participant groups and types of communities. After all, the more interviews and discussions undertaken, the greater the task of manipulating information and extracting conclusions. The team does not have to complete all of the interviews planned, if at a certain point, it has covered all groups and has stopped gaining important information.

Depending on the program size and resources, the total number of in-depth interviews in the exploratory phase normally is between 30 and 120, with about half of them with mothers. The total number of TIPs is usually 20 to 30. And three to six FGDs in exploratory research and two to four in checking research should be sufficient.

Participants should be sampled from various communities to avoid findings that are unduly influenced by a few communities that may have unusual characteristics. However, the more communities, the more time and cost involved, so compromises must be made. A general guideline might be 6–10 communities for the exploratory phase and 2–6 for TIPs.

For a large-scale program, the formative research plan might be as follows:

Example of a Research Plan

Community 1, urban, mixed ethnic groups	Community 2, urban, mixed ethnic groups	Community 3, rural, ethnic group 1	Community 4, rural, ethnic group 2	Community 5, rural, ethnic group 1	Community 6, rural, ethnic group 2	Total
4 IDIs, mothers of <3s	4 IDIs, mothers of <3s	3 IDIs, mothers of <3s	3 IDIs, mothers of <3s	3 IDIs, mothers of <3s	3 IDIs, mothers of <3s	20
3 IDIs, mothers of 3-5s	3 IDIs, mothers of 3-5s	3 IDIs, mothers of 3-5s	3 IDIs, mothers of 3-5s	3 IDIs, mothers of 3-5s	3 IDIs, mothers of 3-5s	18
2 IDIs older girl caretakers of <5s	2 IDIs older girl caretakers of <5s	2 IDIs older girl caretakers of <5s	2 IDIs older girl care-takers of <5s	2 IDIs older girl caretakers of <5s	2 IDIs older girl caretakers of <5s	12
2 IDIs, fathers of <5s	2 IDIs, fathers of <5s	2 IDIs, fathers of <5s	2 IDIs, fathers of <5s	2 IDIs, fathers of <5s	2 IDIs, fathers of <5s	12
2 IDIs, grannies of <5s	2 IDIs, grannies of <5s	2 IDIs, grannies of <5s	2 IDIs, grannies of <5s	2 IDIs, grannies of <5s	2 IDIs, grannies of <5s	12
2 IDI community volunteers	2 IDI community volunteers	2 IDI community volunteers	2 IDI community volunteers	2 IDI community volunteers	2 IDI community volunteers	12
1 IDI community leader	1 IDI community leader	1 IDI community leader	1 IDI community leader	1 IDI community leader	1 IDI community leader	6
16	16	15	15	15	15	92
3 TIPs mothers or other care-takers of <3s	3 TIPs mothers or other caretakers of <3s	4 TIPs mothers or other caretakers of <3s	4 TIPs mothers or other caretakers of <3s			10
3 TIPs mothers or other care-takers of 3-5s	3 TIPs mothers or other caretakers of 3-5s			4 TIPs mothers or other caretakers of 3-5s	4 TIPs mothers or other care-takers of 3-5s	10
6	6	4	4	4	4	20

IDIs = in-depth interviews with observations, FGDs = focus group discussions

Note: Within cells, such as one for 4 mothers, there may be additional criteria, e.g., 2 mothers with latrines, 2 mothers without latrines. Also, <3 etc., refer to ages, under 3, etc.

Choose Research Methods

There are a variety of *qualitative* and *quantitative* research methods. Qualitative methods seek to answer the questions “why?” and “how?” while quantitative methods are used to answer “how much?” Although qualitative methods are emphasized in formative research, opportunities to quantify something that may prove meaningful should not be missed.

The following are descriptions of techniques often used in consultative research to help inform the choice of techniques to use with various participant groups. However, for those inexperienced in this field, these descriptions may not provide sufficient details to carry out the research. Additional documents (including some available on the accompanying CD-ROM) and experienced people therefore should be consulted.

In-Depth Interviews

If a review of existing information still leaves many questions unanswered, programs typically start with in-depth interviews to learn more about *current practices*. However, because people may feel uncomfortable candidly sharing current practices or discussing them in-depth in group settings, one-on-one discussions – one interviewer talking to one participant – are often better at enabling people to express themselves more thoughtfully and honestly.

In-depth interviews consist primarily of open-ended questions designed to encourage participants to relate their stories and views. The interviewer uses an interview guide, while still allowing, even encouraging, the respondent to go beyond the programmed topics and order of questions. Interviewers also should use probes (follow-up questions) to help draw out additional information. In general, interviewers seek to relax participants, so they can provide honest and thoughtful responses. During their time with a respondent, interviewers take advantage of the opportunity to note – and record – any locations and actions of family members related to water, food preparation, child care, etc.

How Long Should an Interview Take?

In-depth interviews, especially when they have an observation component, can last an hour or more. However, planners must be sensitive to respondents' needs and levels of comfort. In Peru, 30 minutes appeared to be the acceptable limit for most interviews other than key-informant interviews with leaders. By the end of the half hour, respondents seemed to have become disinterested. Some even excused themselves early. If faced with such situations, teams can divide the set of interview questions in half, so that only half the questions are administered to each respondent.

A sample in-depth interview guide for hygiene research is found at the end of this chapter.

Observations

Even if an interviewer develops a good rapport with a respondent, the reliability of interview responses always must be assessed. In communities where there already has been substantial hygiene education and people know what practices they *should* be following, respondents may simply try to please the interviewer by saying what they believe is the desired (correct) answer, regardless of what they really do or believe. Therefore, it is important that responses concerning current hygiene practices be corroborated as much as possible by observation and/or by trying to get the same information through other questions as well. For example, if respondents assert that they consistently use a latrine, look at the latrine and the path to it. Is the path worn? Are there cobwebs all over the latrine? Families may claim that their flush latrines are in working order (i.e., not broken), when there may actually be a water shortage in the area, preventing the latrine from being used at all. Only observations (or follow-up questioning) may reveal this. Examine where people say they wash their hands and the containers, water, and cleansing material they say they use. If anyone eats during the interview, observe if they wash their hands and how, and how they obtain water. Ideally, the question guide used should aid the interviewer in making such observations.

Such observations can be structured (by using a checklist) or unstructured. Sometimes the interviewer may ask for demonstrations of a “normal” practice. For example, she may say, “Please show me how you normally wash your hands.” Nevertheless, the researcher should realize that what she is observing is knowledge of a practice and how to accomplish it, not necessarily the actual practice as it is routinely carried out.

Highlights from Observations for a School Health Program in Malawi

Observations in homes and communities:

1. Common wells are left uncovered and contaminated. (During in-depth interviews mothers stated that they replaced the well covers after each use.)
2. Families usually gather drinking water from the closest fresh-tasting source, whether a river, lake or well. Borehole water is often used only for washing clothes and dishes.
3. Water storage pots are sometimes rinsed before being filled, but never washed with a cleansing agent. All of the family members use a single plastic cup to retrieve water and drink. The cup is stored on a nail on the wall.
4. Families with clay water storage pots do not have covers for the pots, but those with tin buckets have covers. However, children often leave off the covers, at times, during the day.
5. Family members rinse hands before eating food, but only wash hands other times when there is visible dirt, such as when returning from the fields. No cleansing agents are used to wash hands.
6. Few families have water at or near toilets, but most have buckets for water in the shower rooms. Men and children tend to urinate in the shower rooms. In some families these rooms adjoin the toilets; in others, they are far away.
7. Mothers routinely clean the family compound. They throw children's feces lying on the ground in the backyard into open garbage pits. In the front yard, they throw them into the bush.

Observations in schools:

1. Most schools have some type of toilet, many of which are cleaned once a day. However, by mid-morning the toilets are already too dirty to use because of the sheer number of students. Certain schools do not regularly clean the toilets at all.
2. No toilets have materials for students to use to clean themselves after defecating.
3. No schools have handwashing facilities or cleansing agents near the toilets.
4. In some schools, buckets with drinking water from boreholes are designated for each class. Other schools require students to walk 50 meters to a borehole for their drinking water.

Source: Sherburne, L. Formative Research for School Health and Nutrition (SHN) Programs: Experience from the Save the Children/Malawi SHN Program (draft, 2003).

Diagnostic Role Plays

Diagnostic role plays (DRPs) allow a group of people – who share some important characteristics – to act out and then to discuss typical behaviors in their communities. Although dramas have long been used as part of program implementation to generate discussion and raise awareness, their use in research is not common. However, they can be useful because people may act out practices that are so “normal” or routine to them that they might not think they are important enough to discuss in interviews. In addition, social relationships can become clear through this kind of dramatic exposure.

This technique may prove most helpful early in the information-gathering process, when enough information about current practices and barriers is known to create meaningful scenarios on key issues, but more information about routine practices in the communities and about social relationships is still needed. A further benefit of the

role-plays is that when people participate in them, they tend to speak using language and metaphors to describe the problem in much the same way as they do in every day life. Understanding this use of language – and even gathering the specific phrases used – could be important for subsequent communications work during the course of the program.

In a DRP session, a facilitator gives a group of volunteers from a defined participant group a few minutes to plan the actions and characters of a scenario related to an important topic of interest. For example, there might be a scenario of a mother trying to convince a 5-year old child to use a latrine and wash his hands, with the grandmother and/or father also present. Or a mother might be urging the father to build a latrine. The players then “perform” the drama in front of the audience. After the first drama is presented, the facilitator leads a discussion with the audience about how realistic was the role play. If the audience believes that it was not typical, then the players or new players may be asked to repeat the role-play. If the audience agrees that it is an accurate portrayal of real life, then the next act could be a continuation of the drama where the same characters develop a solution to the problem, which is followed by another group discussion. Draft guidelines for planning and carrying out a DRP are available on the CD-ROM.

Focus Group Discussions

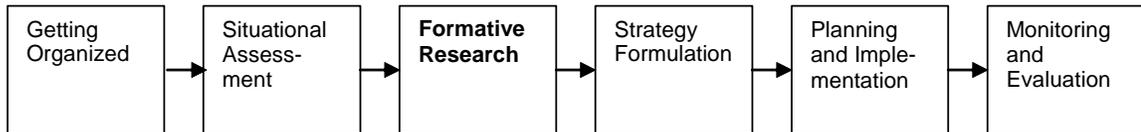
Focus group discussions (FGDs) are facilitated discussions among groups of six to 10 people who share similar characteristics (e.g., rural mothers with children under 5). The effectiveness of focus group discussions depends very much on the availability of experienced facilitators who speak the local language.

Early in formative research, FGDs are most useful for exploring social norms, broad concepts, and the range of behaviors in a community, rather than focusing on individual practices. In these sessions, pictures or other props can be used to help people talk about typical behaviors without feeling ashamed of revealing intimate details about their own lives. At the end of formative research, group discussions may be useful to verify the conclusions and likely program recommendations and ascertain their acceptance by all major participant groups (see more on FGDs in the discussion of checking research in Chapter 6).

The team may find it helpful to use the “Task Box for In-depth Interviews and Group Discussions” in Chapter 6 to support their planning and implementation of focus group discussions.

Summary of Common Research Techniques and Their Uses		
1.	Use one or more of the following research methods if information is needed about:	
	Mothers' beliefs, motivations and constraints related to handwashing, disposal of feces and the handling and use of water	Conduct in-depth interviews with mothers.
	Actual hygiene behavior (handwashing, disposal of feces and handling of water) especially if you believe reported details may not be accurate	Conduct observations in conjunction with interviews.
	Community and facility-based health workers' motivations and ability to provide effective counseling on hygiene behavior related to handwashing, disposal of feces and handling and use of water	Conduct in-depth interviews and possibly observations with health workers.
	Images, perceptions and concepts (e.g., of "clean") related to child health and hygiene behavior	Conduct FGDs (along with other techniques) with mothers and/or other family members.
	Most likely paths of transmission	Conduct in-depth observations and interviews in families with high diarrhea prevalence.
2.	Based on the review of existing information and on the results of Step 1, develop counseling and motivation guides with recommended behaviors to be tested.	Conduct Trials of Improved Practices (TIPs).
3.	Based on results of Step 2, refine the counseling and motivation guides. Conduct one or more types of checking research (only if the project team believes this is necessary).	
	To check responses among people not exposed to the behavioral trials and obtain immediate reactions to recommendations and motivations for behavior change	Conduct FGDs with primary participant groups in other communities.
	To check acceptability of the actions and messages among program personnel, implementers or key influential people	Conduct key informant interviews or FGDs with relevant people.

6. Phases Of Formative Research



Phase 1: Exploratory Research

Phase 1 of formative research consists of exploratory research. It usually includes in-depth interviews and observations and, sometimes, FGDs. The team can use the data summarized in the planning table – particularly the guiding questions as well as the specific questions – to develop their own question guides. These guides should be prepared for each technique that will be used (in-depth interviews, observations, FGDs, etc.) and for each participant group.

The task box below provides a summary of the tasks to be followed in conducting the interviews, observations and group discussions.

Task Box for In-Depth Interviews & Group Discussions	
Preparation Tasks	
1. Prepare the research protocol (procedures) and guides.	Prepare question guides
2. Revise the research plan.	Ensure that there are appropriate question guides for every sub-group in your sample
3. Train the field interviewers.	Develop rapport. Listen well. Question and probe. Observe and record. Assign roles. Record and complete forms.
4. Test and revise the steps and guides in the classroom and field.	Refine and correct the guides with trainees. Estimate the amount of time needed.
5. Draft a field plan based on the research plan and results of testing the protocol.	Specify the number of participants per group (age, category, etc.) in each site. Plan how to recruit participants and divide the interviews/discussions among members of the field team.

Implementation Tasks		
	In-Depth Interviews	Group Discussions
6. Recruit the participants.	Select representative participants in each category. Obtain informed consent.	Invite participants to group discussions. Obtain informed consent.
7. Conduct interviews or discussions.	Interview and record findings.	Conduct discussion. Tape record verbal interchange and take notes about non-verbal data if possible.
Analysis Tasks		
8. Analyze the interviews and observations.	Do an initial analysis – look for patterns or trends. Sort groups; summarize by themes. Note if most, some or few of the participants said or felt a certain way. Compare among groups.	
9. Develop recommendations for testing with TIPs.	List possible recommendations, constraints and motivations.	
10. Draft a brief report	Summarize findings and priorities for next steps.	

Prepare In-depth Interview and Observation Guides

In introducing the interview to the participant, simply explain that you are asking for ideas in order to improve child health programs. To avoid influencing responses, do not talk specifically about hygiene.

Question guides should be structured to make note-taking and analysis as easy as possible. Each question guide should contain different types of questions, as noted here:

- **Background and screening information.** There are normally a few background questions that facilitate analysis and interpretation; for example, the ages of children in a household, the mother’s level of education, and the family’s socio-economic circumstances (as indicated by occupation, land or animals owned) and ethnic group. If respondents’ eligibility has not been determined by an earlier screening interview, then this needs to be done through a few screening questions at the beginning of the interview. The interviewer should also explain exactly what participation will entail and ask the respondent for his or her agreement to participate.
- **Open-ended and closed-ended questions and probes.** Open-ended questions do not have predefined answers while closed-ended questions have predetermined yes-no or categorical answers. Probes are ways to ask for more information after an initial response is given and serve as useful suggestions to the interviewer. Questions should be phrased in a neutral way so the respondent does not think there is a right or wrong answer. In general, any questions that are answered with yes or no should be followed up by other questions that allow the respondents to explain or to tell their stories. For example, the interviewer might ask a mother

about what steps she follows to prepare the evening meal, rather than asking whether she washes her hands before preparing food.

In qualitative assessments, how questions are phrased and in what order they are asked may vary among interviews. The best approach is usually to start with general topics of life situations, values and children's health, and then move on to more specific hygiene topics. Within each topic, start with more general questions. This allows respondents to bring up their own important issues and concepts that the question guide designers may have omitted. Interviewers should ask for elaboration and explanation of any new topics or relevant issues that surface during the conversations. This is precisely how qualitative research differs from survey or quantitative research. The key to successful qualitative assessments lies in training interviewers to recognize relevant issues and to encourage participants to discuss them openly.

- **Observations.** The question guide should include space to record observation notes. A guide for conducting structured observations should specify the behaviors of interest and perhaps include a checklist of practices to observe and record. For unstructured observations, the observers should write a description of everything that happens during a certain event, such as the preparation of the evening meal.

Once the research guides have been developed, the team should test each guide with several people from the participant group. The team should then revise the guides to address any problems found.

Pre-testing and revision can be accomplished in a day or two either prior to or during the training of interviewers.

Organize Field Personnel and Supervision

Plans should include the number of team members needed per site and for each research technique. In addition, quality control measures (e.g., observations of interviews and re-interviews, frequent meetings, daily review of records, etc.) should be planned, along with logistical details such as transportation and accommodations.

Careful scheduling is important because market days or agricultural work may delay interviews unless the team takes these into consideration.

A generic sample budget appears in the box on the following page.

Sample Budget

To estimate the budget required for the research, include the following line items:

Personnel

Research coordinator

1 field supervisor per field team

Field workers

Expert help, such as an environmental health specialist, focus group moderator, etc.

Per diem

Transportation

Vehicle rental (1 per team)

Drivers (1 per team)

Fuel, oil, maintenance

Accommodations and meals

During training (meals, snacks)

During fieldwork

During analysis and report writing (if done away from home)

Supplies (for training, fieldwork, analysis, report writing and report dissemination)

Paper, notebooks, pencils, erasers (all activities)

Photocopies (all activities)

Flipcharts and transparencies (training, analysis, report writing and dissemination)

Computer and printer supplies (optional; mainly for in-house production and printing)

Tape recorders and cassettes (optional; mainly for FGDs)

Snacks and small gifts (optional; mainly for FGDs)

Administrative expenses

Secretarial and related support

Financial support

Identifying Sites and Participants

Research sites should be randomly selected from among all sites that fit the defined characteristics sought. If sites are selected purposefully, the reasons for this selection should be explicit. Prior to field visits, the team should contact community leaders in writing or in person, as appropriate.

Within each site, any procedure for ensuring random selection of participants that meet the selection criteria (e.g., mothers of children under five in families without latrines) may be used. Selection of individual participants may be done at the time of

interviews (always using care to avoid over-sampling those homes that are most easily accessible) or through brief screening interviews of potential participants before the actual interviews. If screening interviews are used, the actual in-depth interviews and/or FGDs can be scheduled with the participants. The researchers should provide transportation to focus group participants if they have to walk more than a short distance to the discussion locale. Snacks and/or small gifts to participants also should be provided.

Conduct the Research

The field team should use the prepared guides to carry out interviews and observations. However, they should also keep in mind the need to continually identify and follow up on new ideas that emerge from the information-gathering. They may need to create new questions to pursue new motivations or barriers or even new influential participant groups. It is important to maintain flexibility in the research process.

Analyze Results

Interview results include summaries, tabulations and any particularly insightful verbatim answers. The supervisors and interviewers review and summarize the interviews and then discuss them each night to identify important issues or insights. During the initial analysis:

- Each field worker completes his (or her) field notes from each interview and observation. Clearly labeled household summary sheets are prepared.
- The field supervisor reviews all field notes, makes comments, and requests clarifications when necessary.
- The team and supervisor discuss new issues and problems. Changes to the question guides are possible at this stage.

Barriers to Improved Hygiene Practices in Nicaragua

Formative research in Nicaragua identified a series of barriers to improving hygiene practices. These included: bugs in existing latrines, which discouraged their use; many latrines filling up with water; poor perceived quality of water from wells; long distances from homes to water sources; the perception that underground water was contaminated; fear that one community's water was contaminated from a nearby cemetery; unreliable quantity and quality of chlorine available; ineffective water filters in use; and concern over disposal of dirty water from the community clothes-washing area.

In the field, interviewers summarize the information from each household by topic and content. Relevant information from various sections of the guide is cross-tabulated. Clearly labeled summary sheets highlight key findings and simplify future analysis tasks.

Each page is coded with the selection and other criteria, such as the age of the child, area of residence, and other selection criteria. This coding allows sheets to be shuffled, as needed, during different types of analyses. For these reasons, clear labeling is essential.

At the end of the fieldwork, the coordinator, with assistance from the supervisors and field interviewers, is responsible for summarizing the interview and observation data across all households. This summary identifies patterns in practices and attitudes and compares and contrasts different population segments and participants. Initial research questions guide the direction of the analysis.

The team needs to decide the relevant ways to sort the information (i.e., by site, access to water, ethnic group, etc.). After sorting the information, they will create summary tabulations for important pieces of information. Summaries present responses on a single topic for all households in one site or for all households in the sample. Generally, small groups are compared with one another.

For additional details about sorting and summarizing the data gathered, see Chapter 4 of *Designing by Dialogue* (Dickin, Griffiths, and Piwoz) on the CD-ROM.

Focus Groups in Exploratory Research

As mentioned earlier, a small number of FGDs may be appropriate in this phase in order to learn more about basic hygiene concepts as described in the situational analysis. Researchers may find the following guidelines for preparing the focus group discussion guide helpful.

The focus group discussion guide is a list of topics or question areas that are to be covered in the focus group. As such, it serves as a summary statement about the issues of interest. A good moderator will exhibit the flexibility and skill to stay on course and cover all the objectives of the focus group, while also allowing the

discussion to flow naturally and spontaneously from the respondents, pursuing new issues raised by respondents if they are relevant to the research objectives.

The moderator's guide can be written as a list of specific questions. However, it is preferable to outline question areas or issues and then to include specific probing questions under each area. To make the flow of the focus group discussion more natural, the sequence of the topics in the guide should move from the general to the specific. The amount of detail in the guide depends upon the experience of the moderator; an inexperienced moderator will need more detail and may even require a list of specific questions. To organize the guide, consider organizing the sheet into three columns: the first lists the broad concepts to be covered, the second key questions to get a discussion rolling, and the third has specific probing questions that may be used as needed. A sample FGD guide is at the end of this chapter, and a guide used in the Peru pilot project is on the CD-ROM.

The question guide is prepared and/or reviewed by the moderator, the program manager and by members of the research team. The moderator should be well versed in the discussion topic and about the specific objectives of the research. The research guide may be modified slightly after each group is conducted (see Debus).

Draft a Summary of Findings

A clear summary of the findings should be written immediately after completing the analysis to capture the details accurately. The draft should then be circulated to the field team for feedback on whether it accurately reflects their impressions of what participants said. The draft report is then incorporated into the final research report. Detailed editing and printing are not required at this point.

The report on the in-depth interviews and observations should focus on the points needed to prepare for trials of improved practices (TIPs). It should include detailed accounts of hygiene behaviors related to diarrheal disease in young children, including positive practices as well as problems. It should recommend the most practical improvements to test with mothers and other caregivers in the trials. And the report should suggest implications of the findings for the development of the program and its education and communication activities.

Exploratory Research Findings in the Dominican Republic Hygiene Project

Focus groups, in-depth interviews and observations yielded the following key findings:

- *Poor maintenance and use of water storage containers.* Appropriate behaviors were not observed in the maintenance of water containers and in the way in which water was drawn from the containers. Few containers had covers. A large cup was usually used to draw water, and when water was extracted, fingers came in contact with the water. Water containers were not clean.
- *Inadequate handwashing practices.* To wash hands, people used the same cup to pour water over both hands. Hands were air dried, although women sometimes dried their hands on their aprons. Soap was sometimes used, most often an all-purpose soap or detergent.
- *No handwashing places.* Most homes lacked a special place for washing hands; people washed where kitchen utensils were washed.
- *No latrines.* Most homes had no latrines, and household members defecated in the fields. Existing latrines were all in use and were shared with neighbors. Latrines were cleaned with Clorox, which is highly regarded as a disinfectant.
- *Use of disposable diapers.* Despite the poverty of most households, residents made widespread use of disposable diapers. In some cases they were washed and reused; they were generally disposed of through burial in the field or burning.
- *No garbage collection.* There was no garbage collection service, and some households were in the habit of burning their trash.
- *Poor economic conditions.* One of the most significant obstacles to a greater hygienic use of water is the poor economic situation of the families, who depend on sporadic work for agricultural companies.

Source: Torres and Bendahmane, Page 27.

Phase 2: Trials of Improved Practices

Trials of Improved Practices (TIPs), which constitute Phase 2 of formative research, often represent the key methodology for enabling planners to make a final determination of feasible sub-behaviors, the barriers to their practice (excluding certain external barriers such as government policies), and meaningful motivations and benefits.

TIPs are designed to test recommendations formulated on the basis of the situational assessment and exploratory research. Their goal is to learn what is feasible in the specific context. TIPs allow planners to understand not only what sub-behaviors are acceptable and feasible but also those which are not (and therefore should not be promoted by the program). Their results also give a good general indication of the potential for success in increasing specific sub-behaviors. TIPs are normally the second phase of field work, because preliminary research is usually needed to gain enough knowledge to be able to design effective behavioral trials.

In TIPs small groups of participants (often 20 to 30) – representative of the primary participant groups – are asked to implement one or a few recommendations (relevant to them as individuals) for a few days or weeks (depending upon the behaviors). TIPs are often done in two visits, but more may be used depending on the information already known about current practices, whether sequential behaviors will be tested, the length of the trial period, and the skills and experience of the interviewers.

A skilled and experienced interviewer may be able to both assess a family's hygiene situation and practices and suggest appropriate new practices that address the particular person or family's needs in just one visit. However, a less skilled or experienced interviewer may need two visits to do the same thing – the first visit to gather information and observe practices, followed by consultation with a supervisor, who can help with the formulation of suggestions, and a second visit to propose and negotiate changes in practices. In either case, once the recommendations have been presented and negotiated, the interviewer and participant come to a precise agreement about what the participant will try. The interviewer then returns to the home to assess the outcome of the trial. (In some instances, the recommendations may also be discussed with other household members who may influence the participant's ability or willingness to carry out the recommendations.) After that final visit, the interviewer seeks to learn as much as possible about the participant's experience in trying out the new practice(s).

A summary table can be created that shows the number of people who were asked to test a particular practice, the number who agreed to try each practice, those who actually tried, those who were able to carry out the practice "successfully," and who intend to continue (see the summary chart at the end of this chapter). In addition, during the TIPs, researchers learn more about participant reactions to the practices – what they liked or disliked, what benefits they noted, what they found easy or difficult, any changes they would make to the recommendations, and other aspects of the trial experience. The barriers and motivations to continue the new, modified practices can be used to inform the behavior-change strategy.

The following table presents an appropriate scheme for implementing trials of improved hygiene practices.

Initial Visit (Day 1)	Counseling Visit (Day 2) (this may be combined with initial visit)	Follow-up Visit (Day 6-10)
<ul style="list-style-type: none"> • Background information through interview and observation • Hygiene resources and practices <ul style="list-style-type: none"> ○ Handwashing ○ Disposal of feces ○ Water handling, storage, treatment and use 	<ul style="list-style-type: none"> • Feedback on practices • Recommendations and initial response • Negotiation and motivation • Discussion with other influential people in family/institution (if needed) • Agreement on specific practices to try 	<ul style="list-style-type: none"> • Relevant changes since last visit (e.g., illness, new technology) • Outcome and response to trial • Modifications • Perceived benefits and difficulties • Intention to continue new practice(s) • How they would explain the practices and motivate others

Trials of new practices are like a pretest of actual behaviors before they go to the larger group. They give planners immediate feedback from participants who have just tried new behaviors, rather than simply relying on their recollections of past practices or reactions to hypothetical questions. Although the quality of counseling and negotiation in TIPs may be higher than can be expected in the actual program, the trial results normally give planners a good (although not precise) idea of the proportion of people who will adopt the new behaviors and of their potential health impact.

Obstacles to Change from the Peru TIPs

TIPs in Peru uncovered a number of obstacles to people carrying out the recommended practices. These included: women's lack of soap to use for handwashing while they were in the fields and families' fear of robbery, which prevented them from keeping their animals outside their homes. In these TIPs, people were given such essential products as soap, toilet paper, and a water container. However, obtaining these products could have been tested as part of the trials.

The project responded to these barriers: "We discovered that many people in the fields rinse their hands with water from a stream or irrigation pipe, but don't tend to use soap. Since the TIPs, and in fact since the inauguration of the project, we modified the soap that is being promoted by the project. The original soap was a typical hand bar which costs about \$0.30, now is another type which costs about \$0.10. The idea behind this change is to make soap more accessible to families, whether it is for home use or in the fields.

"We haven't addressed the issue of robbery of animals... We have promoted keeping the animals close to the house in a cordoned off area, instead of roaming wild all over the patio."

– Kali Erickson, EHP Project Coordinator

The principal limitations of such trials are that they cannot easily be used to test behaviors that occur rarely or unpredictably (e.g., seeking immediate care for a health emergency), or behaviors that are highly dependent upon improved service availability, quality or policy changes (e.g., using health services that currently provide poor quality care). Although such limitations are unlikely to affect hygiene behaviors, hygiene TIPs cannot easily ensure that results will be the same in different seasons, for example, nor can they assess the impact on practices of a new water system, reduced costs for water, or other changes in the larger environment that are likely to take some time to achieve. While TIPs might test a community's willingness and ability to dig a new well, they cannot easily test that same community's ability to manage the use and maintenance of the well over time. Despite these minor limitations, however, TIPs are a key method for designing effective behavior-change activities.

The box below summarizes the tasks of carrying out and summarizing the results of TIPs.

TASK BOX FOR TRIALS OF IMPROVED PRACTICES (TIPS)	
Preparation Tasks	
1. Draft a counseling guide on behavior-change recommendations.	List common family hygiene-practice problems, by age of youngest child (e.g., under 3, 3-5). For each problem (and age), list several sub-behaviors, including alternative sub-behaviors if needed, for improving hygiene. Develop counseling and motivation guides.
2. Design the research protocol (procedures).	Determine the sampling frame and procedures for each household visit.
3. Develop question guides and recording forms.	Specify topics that require additional questioning. Draft hygiene-assessment forms. Draft recording forms.
4. Draft a field plan.	Schedule fieldwork. Assign responsibilities.
5. Train the field team and pretest the guides and forms.	Specify the objectives of TIPs. Prepare TIPs methods and forms. Do role plays and pretesting. Practice formulating recommendations based on assessment visits.
Implementation Tasks	
6. Recruit households.	Identify households for TIPs. Obtain consent.

7. Conduct the initial visits.	<p>Conduct interviews, observations, and hygiene assessment in selected households. Obtain consent.</p> <p>Schedule counseling visit</p>
(Steps 6 & 7 can be skipped if the families who will participate in TIPs are among those who already participated in the in-depth interviews and observations phase.)	
8. Analyze initial data and plan specific recommendations.	<p>Review results of initial visit.</p> <p>Identify hygiene-practice problems and plan recommendations to suggest in each household.</p> <p>Revise counseling guide as needed.</p>
9. Conduct the counseling/ negotiation visits.	<p>Discuss specific recommendations and negotiate with the mothers to try one or a few new practices.</p> <p>Schedule follow-up visit.</p>
10. Summarize the response to counseling.	<p>Preliminary analysis: what recommendations are mothers willing/not willing to try and why?</p> <p>Document motivations and constraints.</p>
11. Conduct the follow-up visits.	<p>Repeat the hygiene-practice assessment.</p> <p>Find out how mothers followed the suggested practices, why/why not, how they modified the advice and why, and their positive and negative reactions.</p> <p>Review and summarize information.</p>
Analysis Tasks	
12. Tabulate results of the trials.	<p>The number of people offered each recommendation, the number who agreed to try, the number who actually tried, the number who carried out the practice successfully, the number of those who intend to continue the recommended practice.</p> <p>Note the key constraints, motivations and perceived benefits.</p>
13. Revise recommendations.	<p>Revise the initial program recommendations to include most appropriate/successful recommendations, amended according to participants' suggestions.</p> <p>Focus on the most common problems.</p>
14. Write a report on the findings.	<p>Summarize hygiene problems, practices recommended, practices accepted, practices tried, practices carried out through the trial period, any intentions to continue.</p> <p>Make recommendations for programming.</p> <p>Note remaining questions/recommendations for checking research.</p>

Phase 3: Checking Research

Checking research is the third phase of formative research. This phase is optional but may be useful for verifying research results with additional members of participant groups, including geographic or cultural groups not heavily involved in earlier information-gathering. Checking is usually done through formal or even informal group discussions.

The basic procedure is to explain to the group key things that you believe you learned from the information-gathering to this point and/or key program actions that you intend to implement based on findings; and to solicit agreement, disagreement, feedback and suggestions. A brief description of how formal group discussions should operate is found at the end of the exploratory research section above.

Summary Research Report

The summary report is intended for program planners and, in some cases, for policymakers. The report should focus on the essential points and omit details that do not relate directly to planning. For example, although a paragraph or two at the beginning of background information is acceptable, a detailed discussion or review of existing information is not required. It is sufficient to cite the background report (prepared at the end of the situational assessment) to highlight several key statistics for context, and make the full report available upon request. See the “Task Box for Interpreting Research Results” and a sample general report outline on the next page.

TASK BOX FOR INTERPRETING RESEARCH RESULTS	
Synthesis	
Use different chart formats to summarize and compare findings from all methods.	<ul style="list-style-type: none"> • Present majority opinions and practices. • Offer range of opinions and practices. • Note reasons why. • Provide specific examples.
Interpret the findings and develop recommendations.	<ul style="list-style-type: none"> • Focus on program actions and priorities. • Avoid biases.
Fill out "Formative Research Summary Table."	
Presentation of Findings	
Prepare a summary report.	<ul style="list-style-type: none"> • Provide results needed by planners.
Write an executive summary.	<ul style="list-style-type: none"> • List key recommendations. • Present priorities for behavior change
Arrange workshop and/or distribution.	<ul style="list-style-type: none"> • Share information with everyone who can use it.

Once the analysis has been completed, recommendations have been drafted and a summary report has been prepared, the project team should disseminate the findings. If time permits, you may want to circulate copies of the summary report to partners, stakeholders and other interested groups and organizations. At the next stage (strategy formulation), the research methods, findings and program implications should be shared to kick off a workshop designed to draft or review and modify the program strategy (see next chapter).

Sample General Report Outline

- **Executive summary (3–4 pages)**
 - Brief summary of the contents of the report (this may be all that some people read)
 - Key recommendations and priorities for programs to improve hygiene behaviors
- **Brief summary of research methodology (1–2 pages)**
 - Purpose of the research and how the selected methods achieve the goal
 - The sample and participant groups
 - Basic steps in research methods
- **Description of population covered by the research (2–3 pages)**
 - Background description of geography, demography, ethnicity, degree of urbanization, literacy, occupations, and incomes in the program area
 - Lifestyle context: general outlook on life, maternal and child caring roles, hopes for children, availability of key products and technologies
- **Description of current child health situation and hygiene practices (5–7 pages)**
 - Health status of the children in the study, particularly regarding diarrhea
 - Summary of practices related to handwashing, water handling and use, feces disposal, and child care and feeding patterns described by relevant subgroups within the sample
 - Comparisons with previous studies
 - Interpretation of the findings, emphasizing factors that need to be addressed in the program
- **Specific description of possible practice changes, motivations and constraints (5–7 pages)**
 - Description of hygiene practices, by population segment, that are most possible to improve, how and why
 - Summary table of responses to recommendations tested with TIPs
- **Suggestions for a program strategy (3–5 pages)**
 - Key constraints that prevent mothers, families and communities from following optimal hygiene practices related to reducing diarrheal disease. Include all factors: lack of time or resources (including infrastructure), perceptions and traditions that favor harmful practices, etc.
- **Final recommendations for program design (2–3 pages)**
 - Priority hygiene recommendations, including messages and approaches that are suggested by the research results. (This is a list against which the content of all the educational materials can be judged, to ensure that they reflect the expressed needs, attitudes and context of the primary participant groups.)

Sample In-Depth Interview Discussion Guide (on Key Hygiene Behaviors for Preventing Diarrhea): Mothers of Children Under 5 Years

[To save space, this guide is not formatted with appropriate spaces to record all of the information.]

Introduction

- a. [Give your name and self-introduction to the possible respondent.]
- b. I am talking to some families in this community in order to better understand children's health problems. We hope that what we learn will help us design better programs that respond to what you people say they need and want.

Do you have one or more children under 5? [There may well be one or two additional questions to see if the respondent is "eligible" for an interview and what category of respondent—by area of residence, ethnic group, etc. – this person fits into. If this person is not eligible, thank her and end the interview.]

- c. [If eligible, explain how the discussion works]:
 - You can say anything you want as long as that is truly how you feel.
 - There are noright or wrong answers, only your ideas and opinions.
 - We will return in a few weeks to tell your community what everyone said in these discussions. However, be assured that I will NOT tell anyone what YOU as an individual say. Your name will not be used, and no one will be told about what any one person says.
 - Would you be willing to talk with me for about one hour? You can continue with your tasks if you wish, and I will just follow you around. [If she declines to interview, ask why, try briefly to convince but do not pressure. Thank her and leave. If she is willing, continue.]
- d. Do you have any questions?
- e. Please answer a few introductory questions about yourself and your family.
 - Who else lives in your home besides you, and what is each person's relation to you?
 - What are your children's names and ages?

Name	Age

[The guide should tell the interviewer how to choose one child to refer to in specific questions, if the mother has more than one child under 5. The preference may be for a child 6 to 23 months old, because this is the age of highest diarrhea prevalence.]

- f. A few of the questions I'd like to ask will pertain to X [name of child].
 - If you do any work besides caring for your family and children, what type of work?

- What type of work does your husband do?

[Record identification information: name, date, eligibility criteria, location]

Diarrhea

1. What health problems most affect children here?
2. What health problem do you most worry about with X? Why?
3. Are there other health problems that you worry for X? [For each mention] Why?
4. Does X ever get diarrhea?
 - In the past 2 weeks? Yes ___ No ___
 - Has X had diarrhea in the last 24 hours? Yes ___ No ___
5. What happens when X gets diarrhea?
6. How does it affect X?
7. How do you feel about these episodes of diarrhea? Do they concern you or do you consider it something not to worry about? Why?
8. Are there different types of diarrhea that children get?
9. [If yes] What are these types and how are they different?
10. What causes each type of diarrhea?

Types of diarrhea	Cause	How to prevent

11. Do you believe it is possible to prevent diarrhea?
 - [If yes, ask] How can diarrhea be prevented?
 - Do you do anything to prevent diarrhea? Please explain.
 - Are there other things that you would like to do to prevent diarrhea but do not for some reason?
 - [If yes, ask] What are they? Why don't you do these things?

Worms

12. Have you heard about intestinal parasites (worms)?
 - [If yes, ask] What are they?
 - What do they do?
13. Whom do they affect the most?
 - Do they affect children?
 - [If yes, ask] How? Please explain.

- i. Do many children have parasites? Yes ___ No ___
- ii. Do you consider worms good or bad or both? Please explain.

14. Can you prevent your family from getting parasites?

- [If yes, ask] What can you do? What do you actually DO?

Water

15. Do you believe that all water is the same? Yes ___ No ___

- [If no, ask] what different types are there and what should each be used for?
- Does your family use water this way? Yes ___ No ___ [If no] Why not?

16. What kind of water is good to drink? [If not mentioned, ask about the clarity, solids, color, odor, flavor, and source]

- Do you believe that the water available to your family is good to drink? Why [or why not]?

17. What can you do to make water good to drink?

- Do you do any of these things at home?
- [If yes] Please explain how you do these things in detail. [Ask for a demonstration. If the mother is doing chores during the interview, you can wait until the end to ask for all of the demonstrations.]
- Does everyone in the family drink this water?
- How is the taste of this water?
- What have you heard about other ways to treat drinking water? [If not mentioned, ask if people around here use boiling, chlorinating, or filtering.]

18. Where does the water come from that your family drinks at home? ...in the fields?

19. Does it sometimes come from other places?

- [If yes, ask] From where? When?

20. Where does the water that you use to cook come from?

21. Please describe to me everything that you do with water to prepare food, cook, and clean up after a meal. Please tell me what you do first and how, then what you do next, and so on. [If not mentioned, ask about washing fruits and vegetables, cleaning food-preparation surfaces, washing kitchen utensils, etc.]

22. Who collects the water for the family?

- Do others help sometimes? [If yes] Who?

23. Is it easy or difficult to get water for the family?

- Why/ why not? Does this depend on the time of the year?
- [If yes] please explain.
- How much time does it usually take each day to collect water?
- Do you feel that this a little time or a lot of time?

24. How is the water transported to your home?

- Is there a cover on the container?
- How do people carry the container?
- How do family members working in the fields get water?

25. Do you pay for water?

- [If yes, ask:] How much do you pay each month?
- Do you believe this is a fair amount? Yes ___ No ___
- Why/why not?

26. Would you pay to have more water available in or very near your home?

- [If no, ask] Why not?
- If yes, ask] How much would you pay each month?

Water Use & Treatment

27. Where do you store the family's drinking water?

- Could you please show me? [Note type of container, if covered, type of cup or ladle to retrieve water]
- How do you retrieve the water? Please demonstrate.
- Which, if any, children retrieve their own water? Please ask them to demonstrate for me how they do it.
- Where do you store the utensil used to retrieve water?
- Could you show me how you retrieve and drink the water?
- Do you ever wash the container? [If yes] how often/how?
- When did you last wash this container?
- How? [Note what soap, other materials involved.]

28. Where does your family bathe?

- Where does the water that your family uses to bathe come from?
- What, if anything, do you use to wash [soap, soap substitute, sponge, etc.]?

29. What do you usually do with left-over water after cooking or cleaning the house?

Hand Washing

30. Do you and your family ever wash your hands?

- [If no, ask] Why not?
- [If yes, ask] Why?
- When do you wash hands?
- [If not mentioned, ask] Do you normally wash?
before eating: Yes ___ No ___
before preparing food: Yes ___ No ___
before eating or feeding a child: Yes ___ No ___
after defecating: Yes ___ No ___
after cleaning a baby's bottom: Yes ___ No ___
- When you are in the fields, do you wash before eating and after defecating?

31. How many times have you washed your hands today?

- How many times today have X's hands been washed?
- Please show me where you usually wash your hands. Please wash your hands the way you usually do. [Note if mother uses water and from where, uses soap or a substitute, rubs hands together at least 3 times, dries hands and how. Also look for a regular place for hand washing, presence of a washing basin or Tippy Tap, water drainage, cleanliness of material used for drying.]

Location	
Water from where	
Cleansing agent	
Number of times rub hands together	
How dry	
Water drainage	

32. Do you have soap in the house?

- [If no, ask] Why not?
 - i. Do you ever make soap at home? Do you know how?
 - ii. Have you ever used anything else besides soap or water to wash your hands? Why or why not?
 - iii. Would you be willing to try washing hands with ash or sand (or some other locally available material)? Yes ___ No ___
 - iv. How available is this material?
- [If yes, ask] What do you use it for? Anything else?
 - v. Where do you buy it?
 - vi. How much does it cost?
 - vii. Do you think it is a fair price?
 - viii. [If not used for hand-washing] Why don't you use it for hand-washing?

Feces Disposal

33. What are feces?

- What is the best thing to do with them? Why do you say that?
- What's good or bad about feces? Can they cause illnesses? How?
- Are children's feces the same as adults? [If no] How are they different?
- Are animal's feces the same as human feces? [If no] How are they different?

34. Where does your family defecate at home? Why in this place?

- Is this always, usually, or sometimes?
- Where else?
- Is it the same for day and night? Yes ___ No ___
- Is it the same all year round? Yes ___ No ___ [If not] why not?
- Where have the family members defecated today?

35. Is there another place you would prefer to defecate?

- [If no, ask] Why or why not?
- [If yes, ask] Where?
- Why haven't you constructed a latrine?

- What would the benefits of a latrine be for your family?
- What type of latrine would you like? Why?
- [If not mentioned, ask about type of material, wooden or cement ground, space to take baths in the latrine, small opening to allow children to use it]
- Would you be willing to dig the hold for a latrine if a health program provided other materials to build one?

36. Where does X usually defecate?

- What happens to X's feces? [If not mentioned, ask about throwing in latrines, in the bush, in a hole or garbage pit, in the garden]
- Where did X defecate the last time?
- What happened to the feces?

37. [If the family does have a latrine] what family members use your latrine?

- When, if ever, do they not use the latrine?
- What do you like about it?
- What don't you like about it?
- How could it be improved?
- Why haven't you done this already?
- Can you please show me your latrine? [Note distance from home and water, type of latrine, condition of path to latrine, cleanliness of latrine, smell, wiping material, privacy afforded, other uses such as storage or bathing, bugs, vermin, mosquitoes, hole or seat appropriate for child. Ask about light to use day and night, if people outside the family use

38. Where do your family members defecate when in the fields?

Communication Channels

39. Where do you most often get information about protecting your family's health?

- Where else do you get such information?
- Where do you get the best, most useful information on your family's health?

<i>Sources of Information</i>	<i>Briefly Describe</i>	<i>Most Often</i>	<i>Sometimes</i>	<i>Most Useful</i>
Family or friends				
CHW				
Traditional healer				
Facility-based health worker				
Radio/TV				
Meetings/clubs/community events				
Drama, songs				
Print material				
Other				

40. Are there any other ways that you think would be good for giving people such information? If so, what are your ideas?

Other

41. Do you have any animals in the household area?

- [If yes, ask] Do they run freely? [Observe]
- [If yes, ask] Do they leave feces close to the house? [Observe]
- What happens to the animal feces?

42. Are there flies in the home? [Observe]

- [If yes, ask] What do you think attracts flies?
- What is your opinion of the flies? Do they bother your family? Are they dirty? Do they bring illnesses?'
- Do you do anything to protect your family from the flies?
- [If yes, ask] What do you do?
- [If not mentioned, ask about covering food, putting away trash, cleaning the area]

Thank you very much! I am done asking questions. Do you have any questions for me?

Generic Focus Group Discussion Guide on Basic Hygiene Concepts for Mothers of Children under 5

Introduce all of the research team present. Explain the purpose of the discussion, that there are no “correct” answers, that everyone should participate, and that each person’s opinion is valuable, the time it will last, and that refreshments will be served. Ask the group’s permission to record the discussion in case the note taker doesn’t catch everything, and promise that no one besides the researchers will listen to it. Mention that all participants are mothers of children under 5 (and other common selection criteria). Ask each person to please introduce herself, and then to tell about the funniest thing her young child ever did. Or if someone can’t think of anything that was funny, they can tell about something special about her child.

Concept	Basic Questions	Probing (Follow-up) Questions
Dirty/clean	<p>Think about your little children...do they ever get dirty?</p> <p>What does your child do to get dirty?</p> <p>So you notice that your child is dirty...and then?</p> <p>Do some particular parts of the body get dirtier than others?</p> <p>So let’s say you notice that your child’s hands are dirty...and then?</p> <p>Let’s say you notice your own hands are dirty...and then?</p>	<p>What does it mean to get dirty? How do you know if your child is dirty?</p> <p>How do you feel about your child getting dirty? Do you ever do anything to try to prevent this?</p> <p>How do you feel about that? Do you do anything? Is there anything good about your child being dirty? Is there anything bad about your child being dirty?</p> <p>Which? How do hands get dirty? How do you know when your children’s hands are dirty?</p> <p>How do you feel about that? Do you do anything?</p> <p>How do you feel about that? Do you do anything? If so, please say exactly how you do it.</p>
Water	<p>If you wash hands with water, where does this water come from?</p> <p>Do you think all water is the same, or are there different types of water?</p> <p>Can water be dirty?</p> <p>Please describe what the water is like that your family drinks.</p> <p>Are you satisfied with the water your family drinks?</p>	<p>Who fetches it? How do you store it at home? Do you always have enough water? Please explain.</p> <p>How are they different? Where does each type come from? Do you like to use different types of water for different purposes? Please explain.</p> <p>How do you know? How does that happen? What is dirty water good for and not good for?</p> <p>[If not mentioned] ask about color, smell, clarity, source, treatment, clean or pure.</p> <p>What, if anything, about it would you like to be different? Do you do anything to water before you use it at home? If so, what, how and why?</p>
Feces	<p>What are feces? What kinds of feces are there?</p> <p>What is good or bad about feces?</p>	<p>Are children’s feces the same as adult feces? Are animal feces the same as people’s feces? Do you use feces for anything?</p> <p>Do you think feces are clean or dirty or what?</p>

	<p>After adult feces come out, where do they belong?</p> <p>After child feces come out, where do they belong?</p>	<p>What most families around here do with adult feces?</p> <p>What most families around here do with child feces? With an infant's feces, a 2 year old's, a 5 year old's</p>
<p>Latrines [assume these mothers do not have latrines; use different questions for a group of mothers that do]</p>	<p>Some [a few] families around here always seem to put feces in a latrine.</p> <p>Do you think its important is it for a family to have and use a latrine?</p> <p>Would you like to have a latrine your family? Please describe the kind of latrine you would like to have if you could. What would it be like?</p>	<p>What do you think about that?</p> <p>What's good about using a latrine? What problems might people have in always using a latrine?</p> <p>If people are having a hard time, suggest things like where it's built, what it's built of, what it looks like, what it's like inside, how easy is it for kids to use, what it smells like, privacy, etc. List all the ideas so everybody can see them. If mothers can't read, draw the ideas. Then discuss which things are most important. At the end, ask each person name the 3 most important things.</p>
<p>Causes of child illness</p>	<p>What are the main illnesses that kids around here get? [Reach group consensus on the top 3 illnesses.]</p> <p>What causes [each of these illnesses]?</p>	
<p>Prevention/fatalism</p>	<p>Can families like yours prevent these illnesses in children?</p>	<p>Which illnesses? How?</p>
<p>Diarrhea</p>	<p>What is diarrhea?</p> <p>What do you think and do when your child gets diarrhea?</p> <p>Are there different types of diarrhea?</p> <p>Can families like yours prevent diarrhea?</p>	<p>Who gets it the most? Is it good or bad and why?</p> <p>How much does it concern you if your child has diarrhea?</p> <p>What are they? What do you think causes each type?</p> <p>If so, how? Which of these things do you do now? Which of these things would you like to do? What has prevented you from doing the things you would like to do to prevent diarrhea?</p>

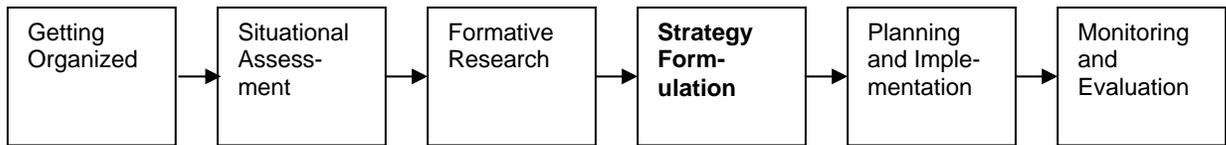
Worksheet: TIPs Analysis

Recommended Practices	No. of people asked	No. of people willing to try	No. of people who tried	No. of people who were able to carry out agreed practices	No. of people able to do practice through the trial period	No. of people who plan to continue
<i>Totals</i>						

Worksheet: Formative Research Summary Table

Ideal Practices	Current Practices	Participant groups	Perceptions of the problem	Feasible practices	Motivations

7. Strategy Formulation



At this point, the goal is in sight: an effective and locally appropriate program strategy to improve hygiene practices related to reducing diarrheal disease. The next step is to use the key insights from the situational analysis and formative research as the basis for designing a program strategy. If the research, analysis and program recommendations have been done well, formulating the strategy should be straightforward and the transition to the program should be smooth.

In Behavior-Centered ProgrammingSM, the program strategy is essentially a format for laying out feasible behaviors and ways to motivate and support people in carrying them out.

Strategy Workshops

In some program contexts, the collaboration of multiple partners, each bringing its skills and experience to bear, will contribute to the strength and durability of program actions. A strategy workshop with all partners can be an effective way to share research results with key people, discuss new ideas bring them “on board,” plan or review the program strategy, and even delegate responsibilities. Two possible approaches to carrying this out are to:

- Develop the program strategy (strategies for promoting and facilitating feasible behaviors) in a small working group and then present it for the review of a larger group of stakeholders at a workshop.
- Have the participants in a large workshop actually prepare the strategies. (Note: This is best accomplished through small groups broken out from the larger group).

At the beginning of the workshop, it is important to explain that while attendees’ personal experiences and opinions are valuable, what was learned in the formative research should take precedence in designing the strategy.

Despite varying cultural and economic conditions, programs designed to improve hygiene practices in different countries often contain many of the same elements. This chapter presents a sample program framework for the main categories of

possible actions. The specific program and activities, however, will depend on the local setting (access to technologies and other resources, policies, etc.), and the results of the formative research.

The Behavior-Change Strategy Matrix

The behavior-change strategy worksheet is a format for analyzing behaviors and the corresponding program actions to encourage and facilitate those behaviors. The left side encompasses the behavioral analysis and the right side, the strategy. Use one or more sheets for each particular participant (or action) group, starting with the primary groups (who, for hygiene behavior change, include mothers, older girls, fathers and health workers). You can decide if other influential groups, such as community leaders or grandmothers, merit their own behavior-change strategies or if incorporating their roles into the strategic actions of the primary participant groups will suffice.

A blank behavior-change strategy worksheet is found on the following page. The headings of the various strategy components may vary. You can use as few as two or three components or as many as six or seven – whatever is needed based on your analysis. A completed sample worksheet is found at the end of this chapter, and a full set of hygiene behaviors is on the CD-ROM that accompanies this guide.

Behavioral Analysis

For each particular participant group, this side consists of:

- a. Ideal behaviors (essential hygiene practices and sub-behaviors)
- b. Current behaviors
- c. Feasible behaviors
- d. Major barriers
- e. Major motivations and supports

Behavior Change Strategy Matrix

Participant group:

Part 1: Behavioral Analysis					Part 2: Strategic Behavior Change Activities*					
Ideal Behaviors + Major Sub-Behaviors	Current Behaviors	Feasible Behaviors	Major Resistances and Barriers	Major Motivations and Supports	Communication	Training	Community (or Collective Actions)	Products or Technologies	Policy Change or Enforcement	Other

*Actions designed specifically to motivate and facilitate people moving from current behaviors to feasible behaviors

Complete one or more strategy worksheets for each primary participant group.

1. Ideal behaviors come from a variety of sources about health practices globally including the IMCI key family practices and Facts for Life. Essential hygiene practices include: wash hands with soap at key times, consume only safe water, and dispose of all feces in a way that does not contaminate the environment.
2. Current behaviors are learned from the situational analysis and formative research.
3. Each major participant group may have between one and four essential hygiene behaviors (that can be further broken down into essential actions or sub-behaviors). These (as well as barriers, motivations and supports) should be developed from the formative research, particularly the TIPs. It is acceptable to list alternative feasible sub-behaviors even if some are feasible for only certain members of the group. For example, all family members over 3 years of age should use latrines consistently, if one is available. Families without latrines should build one or dig holes to bury feces.
4. Barriers include both internal (attitudes, knowledge) and external (environmental) constraints to moving from the current practices to the feasible practices.
5. Rather than ignore the potential constraints that may prevent people from adopting a new behavior, often it is effective to address them directly in communications while providing alternatives to overcome the problem. The reason why some participants may be unwilling or unable to try particular recommendations is identified during the research. TIPs are aimed at providing information on how to overcome these barriers.
6. Motivations are feelings and perceptions that encourage and facilitate new behaviors. Saving time or money, enabling children to play more or do better in school, increasing one's social status, and other perceived benefits may be as or even more important than reducing diarrhea in children. External factors, such as the encouragement of spouses or the presence of a cadre of community health volunteers who might promote the behaviors and support families, should also be noted.

Planners should not assume that “less diarrhea” or “better health” is the most effective motivation. Motivations for specific practices must be learned from mothers and families in each setting through the formative research. For example, some people in certain environments may like the smell of freshly washed hands, while in other areas, people may complain about the smell of soap on hands used for eating (see box below).

What Motivates Hygiene Improvement?	
<p>Benefits of a latrine to 320 households in rural Benin (in order of importance):</p> <ol style="list-style-type: none"> 1. Avoid discomforts of the bush 2. Gain prestige from visitors 3. Avoid dangers at night 4. Avoid snakes 5. Reduce flies 6. Avoid risk of smelling/seeing feces in bush 7. Protect my feces from enemies 8. Have more privacy to defecate 9. Keep my house/property clean 10. Feel safer 	<ol style="list-style-type: none"> 11. Save time 12. Make my house more comfortable 13. Reduce health care expenses 14. Leave a legacy for my children 15. Have more privacy for household affairs 16. Make my life more modern 17. Feel royal 18. Make it easier for old or sick to defecate 19. Be able to increase my tenants' rent 20. For health <p>Source: Jenkins, M.W. (1999), PhD thesis, U.C. Davis, Civil Engineering</p>
<p>"The most important benefit of rural water supply improvements from the perspective of the people affected is generally the fact that water is brought closer to where they live.... There is no indication that rural populations expect health gains." Churchill, A. et al. (1985). Rural water supply & sanitation; time for a change. The World Bank.</p>	

In the Peru hygiene project, when community members were asked specifically about their reasons for wanting to carry out improved hygiene practices, the top responses were to avoid sickness, have healthy babies, show respect and obedience to health workers and save money.

Motivations for Improved Hygiene Facilities and Technologies
<p>A cleaner environment; more convenience; less work; more status; self-respect; increasing the value of the house; better life for children; more safety at night; more safety for women and girls; more privacy; lower risk of witchcraft; less opportunity for adultery; reduced walking distance; protection from bad weather; solving problems of sick or elderly relatives (parents); a condition for marriage; following an example of neighbors or others who are admired; responding to pressure from others; meeting the needs of visiting relatives; etc. (Appleton and van Wijk, Page 23)</p>

Strategic Activities

The broad strategy framework should describe a full range of activities, address barriers, and utilize the motivations and supports for improved behaviors. The types of activities most likely to affect hygiene behavior change are communication,

training, community mobilization, facilitating new technologies or products, and policy change. Based on what they have already learned, coupled with their own access and that of their partners to resources, planners should determine which types of program actions to include in the strategy.

In completing the behavior-change matrix, consider the program planning questions: What needs to be changed? How? By whom? Brainstorm potential actions, then refine the list by discussing the feasibility and appropriateness of each action for your program objectives.

Integrate hygiene-improvement activities with other activities under way by the same organization as well as in partners programs. Existing supportive activities should be listed under motivations and supports. New activities should be listed under one of the strategy components. For the strategy workshop, it may provide useful to indicate the activities already occurring under specific programs with a symbol or color. This will inform planners about activities that should be part of the strategy but that, at this point, have no group taking responsibility for them.

Once the broad framework is outlined, define specific activities that promote and facilitate the feasible behaviors and that address the internal and external barriers to people implementing them.

The main organization and key partners may not be able to immediately implement a small number of activities included in the strategy. Nevertheless, such actions should be noted so that the entire team can understand factors that might limit behavior change despite planned efforts. These activities may also provide an agenda for your project to collaborate with other organizations and projects at some point to ensure their implementation.

Strategic Decisions

If you have been thinking strategically throughout the formative research process, you will already have tested many ideas to address problems. Now you must use what you have learned to make a number of difficult decisions. For example, convenient access to technologies such as potable water, soap, a place for safe feces disposal, and water storage containers with covers and spigots greatly facilitates essential hygiene practices. You must now decide whether and how the program will promote, provide and/or facilitate new technologies and/or teach and motivate people to do the best they can with existing technologies.

Below is a brief description of the most common program components for hygiene improvement strategies. Each of these is discussed in greater detail in the next chapter.

Communication: For each participant group, what are the prime supports that information can provide? Do people need practical information about what to do or how, motivation and encouragement to do it, new skills, help in remembering what needs to be done or how? Decide the channels of communication (media) that are both appropriate for the type of communication required and feasible in the particular setting.

The channels used to reach each participant group can vary tremendously. For example, interpersonal communication, ideally including home visits, is highly desirable. Group activities may also be essential. Print materials, especially aids to support counseling by health workers and volunteers, and reminder materials for people at home, are often important. Radio or television spots may be appropriate depending on the proportion of key participant groups that listen or watch and how often, as well as cost to the project. See Chapter 8 for additional details on media (channels) and materials (counseling cards, brochures, songs, radio spots).

Advocacy activities aimed to influence decision-makers to focus more attention and resources on hygiene improvement – or to change or enforce policies – may be an important program activity. Such efforts may be grouped under communications activities or may be shown in a separate strategy column.

Effective Use of Volunteer Counselors

Community volunteers can be effective promoters of behavior change and improved health but only if the lessons gleaned over several decades of experience are followed. In addition to the prerequisites of proper training and support (both material and supervision), consider the following:

- For child health, the best volunteers are often women in their 30s and 40s who have already had most, if not all, of their children. Such volunteers may not meet literacy requirements, so local compromises may be required. Male volunteers may be particularly appropriate if the program anticipates infrastructure development.
- Programs should not expect volunteers to master too many tasks, to be responsible for too many families (20 seems to be a reasonable number), nor to devote too much time (a few days a month is reasonable).
- Volunteer motivation is critical. Programs should make and follow a specific plan for providing a small incentive every few months. Common ideas are identification cards, caps or t-shirts, and community recognition (i.e., in meetings or festivals), along with supportive and regular supervision. Exemptions from paying (e.g., in health facilities or busses) may also be used.
- Volunteers are often more effective and stable when they work in small teams.
- Counseling and negotiation skills are often the most difficult to learn and should be a focus of supervision and in-service training.

Training: Program agents such as community health workers may require special training on a range of tasks. These could include: counseling and negotiating hygiene behaviors, use of counseling cards, delivering group talks or demonstrations, advising on latrine construction and determining chlorine quantities for different sized containers. Whenever possible, try to coordinate with existing in-service and pre-service training programs. Special training efforts, particularly for new programs, may be needed.

Community (or Collective) Actions: Collective action around certain hygiene issues, such as maintenance and management of a local water system, may be needed. Programs also may decide to facilitate the education of a concerned group of community members in identifying problems and taking appropriate courses of action.

Technologies or products: When a barrier to hygiene improvement is lack of access to a key product such as chlorine or soap, the program may seek to improve its availability at an affordable price (e.g., by working with private companies or local entrepreneurs or by establishing and supporting a revolving fund for community outlets). Alternatively, the program can promote products, such as homemade soap, that do not have to be purchased and that have been tested in behavioral trials and found to be both acceptable and feasible.

The Peru and Nicaragua hygiene projects sought to support community revolving funds to facilitate the sale of low-cost products, including five-gallon plastic tanks with covers and faucets, toilet paper, detergent, soap, ropes to repair well pumps, lime for latrine maintenance, rubber sandals for children, children's potties, chlorine and droppers for chlorine. As noted above, while introducing such external technologies may facilitate behavior change, each program must make its own strategic decisions on the extent to which it can and wishes to do so. Although community revolving funds in general have been difficult to establish and sustain, such funds can represent a viable strategy, assuming careful planning, monitoring and ongoing support (see box).

Revolving Funds for Hygiene Products: A View from the Field

"Our revolving funds are up and running, and we have seen tremendous interest on the part of the families. I think it's worth mentioning this success. For Peru, this element is crucial to the process, as virtually none of the families was using the plastic water tanks, children's potties, chlorine droppers or covered wastepaper baskets. The fund also offers chlorine, soap, detergent and toilet paper. It's helpful to have each health promoter have a complete 'hygiene kit' to do demonstrations in the homes and generate interest. We ended up selling our most essential product, the water tank with dropper, at a 50% discount, because we felt that there is no other product that can effectively replace this item. Although we originally did not want to use credit, some health promoters insisted, because some families really wanted the products but didn't have all the money at once (\$1.25). Our funds are working, but there is the human factor – our health promoters don't like to withdraw money without our presence, as they are unfamiliar with banks, the codes, etc. One way to simplify things would be to help families acquire the 'permanent goods' and just promote (but not purchase) the goods that constantly need to be replaced (toilet paper, soap, etc.). Depending on the circumstances of the communities, this could have some success.

"For a short term project, it would be much simpler if the fund could be donated and used up... [with no intent to [use income to replenish stock].... Overall, I would say that the funds really are useful, but should only attempt to accomplish what the project/PVOs have the capacity to effectively support."

–Kali Erickson, EHP Project Coordinator

Policy change: Changes in policies and legislation, or their enforcement, may be needed to support or reinforce program activities. These may relate to such diverse issues as the appropriate roles and responsibilities of community health workers or policies on chlorine distribution (i.e., not waiting until a cholera outbreak has already begun before distributing chlorine).

If community health workers need to counsel families on hygiene practices but have more responsibilities than they have time to complete, the program may need to advocate for policy change to redefine the duties of community health workers or to urge the formation of another cadre of counselors.

Service Improvements: This category is not usually relevant for hygiene behavior change but may be critical for other community IMCI or child survival behaviors, such as those concerning immunization, appropriate care-seeking, family planning or prenatal care.

Communication Strategy

Communication activities usually constitute a key program action in Behavior-Centered ProgrammingSM. The communications component can be called behavior-centered (or behavior change) communications (BCC). Communication activities have the potential for doing many things to support essential hygiene behaviors, feasible sub-behaviors, and even policy change. Communication can provide factual

information and emotional motivation for all participant groups, including health workers and community volunteers.

A basic principal of BCP is that decisions on which channels, materials, and messages are used should be based entirely on findings from the formative research, not on the preconceived notions of planners about what works or “what mothers need.” The content of BCC is not what planners’ explanations of the reasons for different behaviors, but rather the information that formative research, including trials has shown to be essential to support behavior change.

To complete the communication strategy, planners must identify the communication tasks, specific audiences (participant groups), communication channels, key messages and information, and materials. The process for developing individual materials is described in the next chapter.

Audiences

Communication strategy planning begins with decision-making about the varying communication tasks aimed at specific audiences or participant groups. Often, the primary participant group is composed of mothers or principal caregivers of young children, since usually they care for and feed children, fetch and store water, cook and wash. However, secondary or supporting participant groups of influential people (fathers, children’s grandmothers, and other family members or friends) may also be important. Other influential people to whom communications may be targeted include community leaders, health care workers (traditional and non-traditional) and extension agents.

Even within a prime participant group like mothers, different mothers may need slightly different information, depending, for example, on their access to a latrine or the age of their children. Such specific information is easy to incorporate into counseling materials but is not as easy to convey using group or mass media.

Channels

Several channels may be considered for reaching the various audiences. These include mass media broadcasting (radio and television), group channels (meetings, festivals, performances, natural meeting places), and individual discussions between a program representative and a mother, father, or, possibly, a politician or government official. Print materials can also provide important support to interpersonal communications (e.g., counseling cards) and play a major role in reminding and reinforcing information delivered in other ways. While BCP encourages consideration of all communication channels, it recommends focusing on those that support two-way rather than one-way communication. Although simply transmitting information (“messages”) may be needed, at its core, behavior-change is a problem-solving process for both individuals and groups. Therefore channels that foster discussion and dialogue are most critical for success.

Materials and Messages

In BCC for hygiene improvement, most communication activities aim at reaching families with young children by focusing on feasible and beneficial improvements in their actions. Various communication materials, which may range from a radio spot or a community drama, to counseling cards, provide or support this communication. Effective materials:

- describe specific actions, with clear practical instructions
- focus on a few recommendations rather than supplying too much information
- promote behaviors that are culturally acceptable and feasible
- suggest actions or products that are affordable and available
- include motivating information and reasons for making changes
- acknowledge and suggest ways to overcome constraints

The matrix below provides a good way to envision the logic of the entire package of messages and materials.

Overview of the Message and Media Plan

Material	Target Audience(s)	Purpose	How Material Used
<ul style="list-style-type: none"> • A material can be a counseling card, take-home reminder materials, poster, radio spot, community drama, cassette recording, etc. • The target audience is the main group you hope the material will inform, motivate, teach, remind, etc. • The purpose is to inform about ..., to motivate to..., etc. • How the material is used (e.g., when the spot will be broadcast; where the poster will be placed; who, when, how often, and how the counseling cards will be used; who, when and where the drama will be presented.) 			

Although the communications plan usually includes a variety of media, experience indicates that an essential core action remains **individual counseling** by a local health or community worker (or volunteer) interacting directly with mothers and other caregivers. The counselors assess the families’ needs, then offer recommendations tailored to their preferences and resources. Information given through other media should be used to confirm and support information provided through these individual counseling efforts.

Individual counseling should not only suggest small improvements in behaviors but also, to the extent necessary, offers people a choice of improved behaviors and how to accomplish them. For example, to treat water for cooking or drinking, boiling or chlorination is ideal, but if boiling or chlorination does not work for a particular mother, a counselor might suggest that the mother at least purify water by leaving it in a clear container in the sun and then avoid using the water that collects at the bottom of the container for drinking or cooking. Families that cannot afford to buy

soap for handwashing can still derive significant health benefits if they use homemade soap or another cleansing agent to wash properly at key times. And so while mass media such as radio spots can promote key concepts - wash hands with a cleansing agent at key times, use only safe water to drink or cook, and safely dispose of all human and animal feces - precisely how an individual mother does each behavior can best be negotiated via individual counseling.

Natural Communication Spaces

The situational analysis and formative research should seek information on “natural communication spaces” where community members talk, e.g., in parks or plazas, or where there are opportunities for conversation or materials on hygiene, e.g., in stores that sell hygiene products. For example, in Cucaramanga, Colombia, so-called *ciclovias* – gatherings in public parks that occur on Sunday mornings – became the central focus of a health communication strategy that addressed child health issues. This communications channel was complemented by other approaches, including radio broadcasts.

Project Size and the Cost of Materials

An issue in three hygiene pilot projects, each of which covered three to nine communities, was the high cost of producing colorful, professional materials in small numbers. Projects that are small in scale should consider:

- Arranging – right from the time of program conception – for other organizations to help pay for the production of materials that they can also use for their own projects.
- Designing fewer or less-expensive materials (for example by using lighter weight papers)
- Finding for-profit companies that are willing to pay for materials production in return for having their logo and possibly a short message included in the materials. (Of course, projects should not accept such assistance from companies whose products are harmful to health, such as cigarette manufacturers.)

Spending significant amounts for materials in small projects makes the most sense when the organizers intend to expand the program area and/or the project is used as a training ground for participating groups and individuals, who will then use their new knowledge and skills to develop effective programs elsewhere.

The following are the types of materials that may be used to promote specific behavior changes:

Counseling cards to help community workers tailor their messages. Counseling cards usually have pictures on the front to illustrate recommendations, and (often but not always) words on the back that include questions to ask the mother, along with suggestions on how to negotiate small improvements in practices based on the mother’s current practices and what she is willing to try. The cards should have a logical organization to facilitate discussions between the counselor and the families about information that is relevant to them. For counseling on hygiene practices, there might be separate cards for families with latrines or toilets and for those without such facilities; separate cards for those with access to potable water at the source and those

without access. A single card might address disposal of child feces but would need to contain appropriate ideas depending on the different ages of the children.

Counseling cards should include “assessment” cards to facilitate an understanding of current practices, along with “counseling” or “negotiation” cards to support a discussion with a mother and then attempt to get her agreement to try one or two small behavior changes. An example of each type of card is found at the end of this chapter. The full set of counseling materials from three pilot projects are found on the CD-ROM that accompanies this guide. (These counseling materials do not literally have to be “cards.” However, large, plasticized cards are a common format.)

A more general set of cards for Community IMCI can be color-coded by the age or developmental stage of the child or by other important factors, such as current illness. The counselor uses only cards appropriate to that mother and child, which makes the communication specific and relevant and which avoids overloading a mother with too much – sometimes irrelevant – information.

The tremendous advantage of regular contact with a mother is that the counselor can try to motivate acceptance of small improvements in practices, eventually reaching or at least approaching the ideal practice. For example, if the family believes it cannot properly wash hands at all critical times, it can start by washing after defecation, and then, in subsequent sessions, perhaps additional times can be negotiated.

Print materials are often appropriate for health workers, trained volunteers and policymakers. However, where mothers and fathers have limited literacy, materials with too many words are not likely to be understood by many. That said, the most useful print material for mothers and families may be reminders, done exclusively or primarily using drawings, that reinforce individualized counseling. Larger projects might also consider creating manuals and job aids for health workers and a newsletter to be used for advocacy, motivation of staff and volunteers, and information exchange.

At the end of this chapter is a poster created for homes in the Nicaragua project. The poster is designed to remind people of their agreements to try new practices and to give them a visual sign of progress (by allowing them to place stickers after they have followed a new practice for three months).

Reminder Materials in Peru

The EHP project coordinator in Peru states that “...[these] materials are considered very attractive to the families, and this creates interest in posting them in their homes.” Their contribution to behavior changes will be evaluated soon.

Considerations for Media and Materials Selection and Development

- **Local resources for communication:** Consider including the traditional means of communication used in the daily lives of your program's population groups. Examples include traditional storytellers, singers or musicians. Also, seek organizational resources, including social, professional and economic associations, such as rural water cooperatives, to support your communications efforts.
- **Mass media access and use patterns:** If your project is planning to use mass media to disseminate messages, consider the population groups that will have access to these media channels. For broadcast media (radio and TV), consider the time of day people tune in and the programs they listen to or watch. For example, in parts of Latin America and Asia, television ownership is common, whereas in many African countries, television is likely to reach primarily those who may already have access to health information, are relatively wealthy or well educated.
- **Types of information:** Various media channels are better suited for different types of information. While interpersonal communication is effective for teaching complicated information because it can be tailored to individual needs, mass media may be appropriate for raising awareness at the institutional, community and individual levels. Print materials such as posters and brochures also may be effective for raising awareness and reminding people of behaviors that entail several steps or stages. Newspapers and other print materials may be useful in getting key information to policymakers.
- **Reading skills and pictorial literacy:** Obviously, people must be literate (in the relevant language) to understand newspaper articles and most print materials. But even drawings or photos may not be well understood by people insufficiently exposed to regular communication materials. In particular, sequencing of events, background detail and three-dimensional representations can be confusing. Adequate and effective pretesting of materials is necessary to help to overcome this potential problem.
- **Size of audience:** It may prove difficult to provide individual counseling if the audience is large and budgets are limited. In such cases, a program might find it necessary to rely more on mass media. On the other hand, if the audience is small, use of mass media may not be cost-effective. Thus, the Peru project created audio dramas but used them on cassettes with community groups rather than broadcasting them on radio.
- **Cost:** In addition to the relative cost of using different media and the economies of scale that can be achieved with larger audiences, it is important to consider the effectiveness of the media used. For example, the cost of communication per person by using mass media for a large project may be less expensive than other approaches, but if counseling and negotiation are needed to bring about behavior change, their costs, even for larger groups, must be included.

Posters for health facilities or community centers. Posters tend to be over-used in health communication, probably because they are “easy” to design and produce. While they cannot replace the need for and advantages of individual counseling, if carefully designed and pre-tested, they can be effective in presenting specific messages to particular audiences. Posters or stickers may be used near handwashing “stations” to remind people of the need to wash hands, as well as the steps for doing so. The “wall life” of posters placed on outside walls is often very limited.

Radio spots and cassettes. Radio spots may use a dialogue format that features a character specifically developed and promoted as “a voice of wisdom” on good hygiene practices. Such characters might discuss specific practices and address key resistances. Radio and television may also be good channels for reaching policymakers and for supporting the idea of community health workers as

knowledgeable and helpful on hygiene and other health issues. Cassette recordings of the spots can also be used as discussion-starters for group counseling sessions.

Flip charts. Flip charts are simple and versatile educational materials that can be used by community workers in a variety of settings and with different participant groups. Pictures and messages on the charts can address general concerns in group settings, such as the need for men to pay more attention to hygiene and to use family resources wisely.

Community theater. Dramas that model desired behaviors and address common barriers may be an entertaining way to reach families and influential community members. However, their use should be carefully planned. Using a professional drama troupe may be expensive and not cost-effective for the number of people reached. On the other hand, using community theater groups can be an effective tool, but only if the drama conveys key messages and issues, and it is used as a way to stimulate a discussion of issues and a question-and-answer session following each performance.

Other media. Other media may include loudspeaker announcements in the community, and the creation of specific lesson plans and projects for school children (e.g., research or monitoring practices of their families or communities).

Materials Used in Peruvian Hygiene Project

These included: 10 counseling cards, including three for diagnosing the family's current practices and seven for negotiating improved practices; reminder posters; promotional posters (one to promote purchase of essential hygiene products); a leaflet on the hygiene store; dramas recorded on cassettes to be used with groups; and for the volunteer promoters, a manual, photo ID card, monitoring forms, and various materials to identify project volunteers and reward their work (t-shirts, caps, etc.).

Sample Behavior Change Strategy Matrix

Health Problem: Diarrheal Disease

Participant Group: Mothers/primary caregivers of young children

Behavioral Analysis					Program Activities to Support Behavior Change				
Ideal Behaviors	Current Behaviors	Feasible Behaviors	Major Barriers	Major Motivations & Supports	Communication	Training	Service Delivery Improvement	New Product or Technology	Policy Change
<p>Wash hands at all key times:</p> <p>Obtain water</p> <p>Obtain cleansing agent</p> <p>Use soap or other cleansing agent and water</p> <p>Rub hands at least 3 times</p> <p>Rinse hands with falling water</p> <p>Air dry hands or dry them with a clean cloth</p>	<p>Wash hands at some key times – mostly after defecation and when hands are visually dirty before eating or feeding</p> <p>Wash with water but no cleansing agent</p> <p>Rub hands 1 or 2 times</p> <p>Rinse with whatever water is available</p> <p>Wipe hands on clothes</p>	<p>At times when sufficient water is available, wash hands adequately at all key times</p> <p>A few families who can afford it, can purchase and use soap but most can use ash or sand as a cleansing agent</p> <p>Rub hands at least 3 times</p> <p>Rinse with falling water</p> <p>Air dry hands</p>	<p>Mothers are not used to using ash or sand</p> <p>Hard for mothers to remember to place ash near handwashing location on a regular basis</p> <p>Mothers believe they don't have time</p> <p>Mothers not convinced about need to wash even if hands don't appear dirty</p> <p>Some mothers must carry water long distances so don't want to have to carry more; therefore sufficient water not always available</p>	<p>Promise of less diarrhea among children and others</p> <p>Mothers already do some handwashing, (but not often enough or adequately)</p> <p>Impress the neighbors with handwashing set-up</p> <p>No monetary cost; ash and sand easily available</p>	<p>CHWs give health talks and handwashing demonstrations, organize mothers to "tour" good handwashing facilities in some homes</p> <p>Community volunteers with counseling cards to negotiate improved behaviors</p> <p>Radio spots to emphasize importance and idea that everyone's doing it & the efficacy of sand and ash as cleansing agents</p>	<p>Training of CHWs in handwashing promotion</p> <p>Training of community volunteers</p>	<p>Regular supervision of CHWs & community volunteers</p> <p>CHWs should organize volunteers to carry out periodic monitoring of diarrhea incidence and assessment of handwashing, giving community feedback on results</p>	<p>Promote making and using a Tippy Tap to enable people to use minimal water for washing hands</p>	<p>CHWs responsible for community outreach will train and supervise the hygiene improvement activities of community volunteers</p>

Examples of Graphic Materials

DIAGNÓSTICO DE LETRINA

¿Quiénes usan la letrina?	 Papa usa siempre	 Mamá usa siempre	 Los hijos usan siempre
¿Dónde caca la wawa de 2 años?	 En un bacín	 En el patio	 En la letrina
¿Dónde caca la wawa de 3 años?	 En la letrina solo	 En la letrina con mamá	 En el poto
¿Quién limpia a la wawa?	 La mamá	 Nadie	 El hermano
¿Dónde bota la caca del bacín?	 En la letrina	 En el campo	 En la soequis
¿Dónde bota la caca del pañal?	 En la letrina	 En el balde con doró	 En el campo
¿Cómo lava el bacín?	 Con doró y desigante	 Solo con agua	 Con doró
¿Qué hace con el guano?	 Queda en patio	 Recoge a diario	 Apila lejos de casa

Cambiando Comportamientos: USAID / EHP-OPS

A diagnostic card from Peru to help community volunteer assess the family's current practices regarding feces disposal.

7 Bebemos siempre agua saludable



El envase con llave y tapado es fácil de lavar, nadie toca el agua.



Lavarlo cada 3 días evita que se contamine el agua.



Sólo con un sacador limpio de mango largo, el agua se mantendrá libre de los microbios.

A counseling card from Dominican Republic to help community volunteers counsel mothers on using and maintaining the water container promoted by the project

COMPORTAMIENTOS PARA EVITAR LAS DIARREAS



Tenemos agua, jabón, y toalla en el rincón de aseo



Cloramos el bidón grande de agua para cocinar y lavar trastes



Cloramos el bidón de agua para beber



Lavamos los bidones cada 3 días con cloro, jabón y paste



El agua del lavadero exterior va a un canal y de allí al sumidero.



Las mamás entrenamos al niño a usar la letrina y le limpiamos



Botamos el pupú de los pañales en la letrina



También botamos el pupú de la bacinilla en la letrina



Nos lavamos las manos en el molendero con agua y jabón



Todos nos lavamos las manos con agua y jabón antes de comer



Al lavarnos restregamos con jabón las manos al menos 3 veces



Lavamos con detergente y cloro la bacinilla del tierno



Los niños permanecen calzados todo el tiempo y al tierno lo mantenemos en un petate para que no se ensucien sus manos ni juguetes



Las mamás lavamos los pañales y luego el lavadero con jabón y cloro.



Después de trabajar, el papá, así como todos los demás, nos lavamos las manos con jabón en el molendero y secamos con una toalla limpia



Luego de usar la letrina nos lavamos las manos con jabón en el molendero y secamos en una toalla limpia

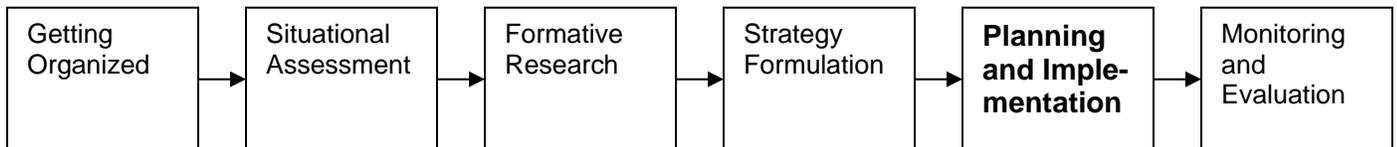


Papá y mamá barremos el patio y recogemos el pupú de los animales todos los días para que no haya ninguna suciedad con que se contaminen los niños y así no les de diarrea

Mejorando Comportamientos en Higiene. USAID/EHP-OPS.

A reminder poster from Nicaragua for families on key ways to prevent diarrhea.

8. Planning and Implementation



Good planning is the cornerstone of program implementation. At this point, the completed situational assessment and formative research should have provided program planners with key information about current hygiene practices, as well as insights into realistic behavior changes that mothers and others are willing and able to make. Planners will have already developed a behavior-change strategy that encompasses a variety of interventions specific to the population groups that have been identified. During this next phase, program staff should do the following to actually begin implementation:

1. Prepare work plans and finalize budgets for each strategy component.
2. Develop, test, finalize and disseminate any communication, education and training materials needed.
3. Carry out training.
4. Develop products and/or services, as needed.
5. Develop other components (advocacy, promotional), as needed.

Work Plans for Each Strategy Component

The behavior change strategy focuses on creating a logical flow of program activities for achieving behavioral and health objectives. The next step is to develop a work plan with implementation steps for each component. Work plans should stipulate the following:

- **What** each activity will be.
- **When** each activity will start, how long it will last, and when it will end.
- **Who** will carry out each activity, including staff, partners and technical assistance.
- **How** the activities will be able to be implemented – in other words, what human and material resources are needed.

One format for this work plan is found in the completed worksheet at the end of this chapter. Each of the components of the behavior-change plan (e.g., communications, training, etc.) should have its own plan that includes the elements listed above (i.e., what, when, who and how). An overall work plan should also be developed, allowing managers to list all activities, ensure that there are sufficient resources – time, people, materials, funding – to implement them and that the sequencing of activities (what comes first, what happens simultaneously) is appropriate.

Points to Consider When Initiating Implementation

Phasing-in of activities: An important challenge for program planners is to define an appropriate schedule for the implementation of activities. Planners must ensure, for example, that before activities designed to stimulate greater popular demand for latrines are undertaken, the health service system or program is ready to respond adequately to that increased demand (e.g., with latrine seats and concrete floors for any family that digs an adequate hole in an acceptable location).

Sequencing of activities may also involve implementing a new program on a small scale first, revising materials and methods based on that experience, and then expanding program interventions and activities to a larger scale. Program staff will need to determine how best to accomplish this.

Coordination of mass media interventions and local media activities also may be important. For example, if radio programs are to promote community workers as credible sources of hygiene information, then before radio materials are broadcast, these workers need to be trained and equipped and become active in their communities.

Supervision: Ensuring regular, supervision is critical. At its most useful, proper supervision provides managers and planners with valuable information about progress, successes and challenges, and it gives those who are being supervised helpful feedback about what they are doing well, what they can improve, and how to make those improvements. Necessary time, resources, and guidance for proper supervision must be included in program plans.

Working with outside assistance: Most countries have a wealth of in-country resources that might provide technical assistance at various stages of the planning or implementation process. These sources include NGOs, PVOs, universities, private firms, consultants or other agencies. When carefully planned and managed, obtaining such technical assistance often can be a good investment.

The sample work plan format at the end of this chapter may be helpful to program staff as they begin to plan for implementation. The tasks described essentially are similar for any program implementation – to prepare good plans, to manage activities well, to supervise and monitor in order to assess progress and identify necessary adjustments or changes.

Developing Communication Materials

As described in Chapter 7, based on the situational assessment, review of existing information and formative research findings, the program staff should outline ideas for appropriate communication materials for each audience, including the purpose of each material and how it will be used.

Creative Brief

A useful bridge between the formative research and the design of individual material is preparation of a creative brief (Alegre, J.C. et al.), providing a synopsis of the material to be developed. Based on previously known information and new research findings, it specifies: the audience, its concerns, the material's objectives, how it will achieve them, what it should look like, what it should say, and how it should be used. All key partners should be given an opportunity to comment on the draft briefs and then agree on a final version, ensuring that all relevant parties are in agreement.

Project team members, working with the research coordinator/team, should prepare the creative briefs. If the project is working with two or more very distinct cultural groups, there may have to be more than one version of some materials that vary in language, images and even some content. Design and production should be left to a professional in their own organization or a partner organization. If such a resource is not available, a consultant or advertising agency may be required to create the materials and help manage the production process.

Content of a Creative Brief

Background – What is the background of this activity? Why are you doing it?

Population Groups – Who should this communication reach? Be specific. For example, do you need to reach both mothers and fathers? What are the socio-economic, cultural, educational, lifestyle, and psychological characteristics of the audiences that are important to know for this communication? Are there other groups that should also be targeted?

Objectives – What do you want the audience to do after they hear, watch or experience this communication?

Obstacles – What beliefs, cultural practices or misinformation stand between participants and the desired objectives?

Key Benefit – Based on formative research findings (but not your own ideas or preconceptions), select a single benefit that the group members will experience if they do what the communication suggests.

Support Statements/Reasons Why – List the reasons why the key benefit outweighs any obstacles and the reasons why what it promotes is beneficial.

Tone – What feeling should the communication have? Should it be authoritative, light or filled with emotion? For instance, are you appealing to parents to avoid the guilt of not acting in time to help their child; to become well informed so that they can take needed actions; to carry out their responsibilities as “good parents”; to do their job so that health personnel can do theirs?

Format – What should the material look or sound like (based on audience preferences, requirements for communicating the agreed-upon information, ease of production and cost, sustainability)? Will it include many words or only a few? In what language(s)? Are photos or drawings planned, and in what style? What design elements will make it so attractive that people will look at or listen to it frequently?

Creative Considerations – Is there anything else the creative people should know? For example, what types of people should be represented in any photos or drawings?

Getting Community Input

Even before pretesting, many projects (including the hygiene pilot projects in the Dominican Republic, Nicaragua and Peru) have found it extremely useful to get community input during the conceptualization and design of materials. To do this, a project team, including an artist, should visit a few typical communities, observe hygiene conditions, and meet with groups of mothers (and possibly other participant groups) to discuss key concepts for the materials and draw representations of these ideas, continually revising the drawings until the mothers (or others) are satisfied that the pictures accurately represent their reality and that concepts presented are both acceptable and feasible.

Although pretesting of the more refined draft materials will still be needed, this step should ensure that major problems will have already been eliminated.

Pretesting

There are few absolutes in program planning and development, but this is one: NEVER skip the very important step of pretesting. The project team and those designing the materials need specific feedback about the materials from the populations with whom they will be used. They will need to know whether the messages are clear, easy to understand and acceptable, as well as whether they are likely to stimulate or support specific action. Thorough pretesting can help a program use its resources judiciously by developing effective materials. Pretesting should result in changes to the materials. If, after a pretest, no changes are recommended, consider repeating the pretest.

Pretesting should determine:

- Comprehension: Is the message understandable?
- Identification: Does the message seem pertinent to the lives of the audience? Are signs, symbols, language used, and items in pictures such as furniture and clothing relevant to their surroundings?
- Acceptability: Are the topics acceptable? Are sensitive and controversial messages presented in ways that do not alienate the audience? Are the messages, colors, pictures, music, presentation and format appealing?
- Motivation: Does the message move people to act? Are the sources and messages believable?

There are a number of key points that should be kept in mind as the pretesting work is developed and carried out:

- Pretest materials as they will be produced – i.e., with the same colors, format, appearance and feel.
- Each of the materials to be used – e.g., text and drawings for print materials, music and script for radio, etc. – needs to be pre-tested individually.
- The people who use the materials, as well as the people with whom the materials will be used, should be involved in the pretesting. For example, pretesting of counseling cards should involve interviewing both the mothers before and after they have been counseled with them, and the counselors themselves after they have used the cards to counsel those mothers.

In addition, even as the artists or scriptwriters are in the process of creating the materials, they should observe at least some of the interviews, so they can hear directly from the target audiences what they identify with, what they like or don't like.

Pretesting materials may be conducted using a qualitative approach similar to the method used in doing the formative research. This approach generally uses one of the following methods:

- **Individual interviews.** Participants in pretesting must meet criteria set in advance. While the selection of interview subjects should be done as conveniently as possible, it should ensure that they represent typical members of their group. Since the behaviors of interest take place in the community, select and interview participants there rather than in a health facility, where the mothers present may not be typical of all community mothers.
- **Group discussions (three to 10 participants).** This method allows you to quickly gauge the reaction of a group of people to materials. Effective group facilitation is critical in this situation, to avoid the opinions of one or two participants from dominating the discussion.

Pretesting may also be conducted using a more quantitative approach with standard questionnaires that gather information from a larger sample of the population. Although the interpretation of findings is much easier in this approach, the questions are more researcher-determined, and the feedback may be too superficial, particularly for complex materials such as radio spots and counseling cards.

As indicated in the box below, one challenging aspect of pretesting is deciding what changes to make. Staff may have to make tough decisions based on time, budget, the strength of opinions and judging which of the requested changes are truly essential for clear communication, as opposed to personal preferences which may vary greatly. While in quantitative pretesting, quantitative scores can indicate the strength of opinions, they do not necessarily tell the whole story.

Pretesting Child Health Materials in Guatemala

In 1998 the BASICS Project and partner PVOs pre-tested the following materials aimed to support improved behaviors for child health: a counseling flip chart for CHWs, three take-home reminder materials used in sick child visits; a guide to community dramas; and a booklet of simple weaning food recipes. Initially, the draft materials were tested with PVO health volunteers, changes were made, and these materials were then re-tested with mothers and volunteers.

- The indigenous population suggested many more changes than the mestizo (ladino) group. (Separate versions of all materials were prepared for the indigenous and ladino populations.)
- The changes suggested by mothers were quite different from those that seemed important to the project staff. Mothers wanted many changes in drawings (larger size, the same size figures on the same page, all figures in color, and no partial figures) Because of practical constraints of time and budget, only some of these suggestions were followed. Mothers also had many suggestions concerning cultural appropriateness (of shoes, clothing, furniture, etc.). They were confused by lines in the drawings showing wrinkles, shadows or tears, so most of these were eliminated. Drawings of grandmothers also significantly disturbed the audience, so these sketches were either eliminated or the figures made to look younger and “happier.” Mothers wanted many of the figures, even of mothers whose babies were sick, to look happier. They also did not like seeing sick babies. These could not be eliminated, but some were changed so they did not look quite so miserable.
- What did not bother the mothers at all, but which did concern the project staff, were problems of perspective, body portions and the accuracy of some body parts.
- The mothers had almost no suggestions regarding message content. They felt that the messages were correct, feasible and very useful. They stated that the materials were wonderful and would really help them learn. Some of these responses may reflect politeness and gratitude that someone was making the effort to help them.
- Despite their brief training on use of the counseling materials, the volunteers did not counsel effectively. Most of the time, the mothers’ recall of information was only very general, and they could not state the main take-away points. This pretest indicated the need for good training and follow-up in the program.

When pretesting training materials, even after reviewing and revising them with individuals and small groups, it is helpful to use them in one or more training situations and then revise them again on the basis of actual field experience.

It is essential to budget for the time required to fully analyze the pretest and make necessary adjustments. As stated previously, significant changes in the materials should undergo another pretest with a small sample of appropriate people.

Training

Another component included in almost every strategy is training. Training can address communication skills (e.g., counseling, using project materials) or technical areas (e.g., how to select and construct appropriate latrines for families’ preferences and environmental conditions). Training is sometimes included in other work plan components, or it can have a work plan of its own.

In planning training, consider the following questions:

- **Who and Why?**
 - Who will be trained?
 - What are the primary objectives?
 - What specific tasks will they be trained to perform?
 - Who will lead the training?
- **When** will training take place?
 - How many training sessions will be conducted?
 - What will the sequence of sessions be?
 - How long will they last?
- **Where** will the training take place?
- **What materials** or supplies are needed? (This includes communication materials that people are being trained to use.)
- **What** will the **costs** be?
 - What are the costs for room rental?
 - What are costs for food and equipment?
 - What are costs for participants' per diems and transport?
 - Are there any trainer costs?

A sample worksheet on planning training is included at the end of this chapter.

To develop the content and materials for individual training sessions, use good instructional design techniques and adult learning principles. It may be helpful to keep the following steps in mind to support materials development efforts:

ADDIE: Analyze, Design, Develop, Implement, Evaluate

Start by **analyzing** characteristics of the participants, including their educational background and prior experience in carrying out the new tasks they will be taking on. It may help to involve a few participants in the design of training. Then think about the specific tasks that they will need to perform after the training. The “job or task analysis” includes all of the steps required for each task, the sequence of steps, and the level of mastery the participants will need to accomplish the task. The next level of analysis is the “instructional analysis.” Consider the knowledge, attitudes and skills that the participants will need, what would be “nice for them to know” compared to what they “need to know,” and the sequencing of sessions that would be most effective.

You may then begin to **design** the training, starting by defining the objectives. Always develop measurable and observable objectives that use action verbs. For example, “to understand” a concept is difficult to measure, but “to describe” or “to define” the concept would be measurable and observable. Each objective should be linked directly or indirectly to the knowledge, skills or attitudes that the instructional analysis has identified as necessary for carrying out the specific tasks to be performed.

Select the activities and sequence of activities for each unit of training. Keep the “active” in activities (we learn by doing!), and tie every activity to one of the objectives so that each activity helps the participants accomplish at least one of the learning objectives.

Once the analysis and design steps are completed, then the training guide and activities can be **developed**. Structure activities in a consistent manner throughout the training guide. For example, each activity may start with an introduction and explanation, followed by a trainer demonstration of a new skill and practice time with feedback for participants. Where possible and appropriate, training should include practice time in the field.

Next is training **implementation**. During the training, trainers should be expected to follow the training plan and keep track of participants’ progress.

Finally, **evaluation** of the training should cover both the process (e.g., quality of implementation, participant as well as trainer satisfaction) and the outcomes of the training (e.g., level of mastery of new skills).

Training is most effective when based upon several important principles of adult learning. Adults learn best when:

- they are active in the learning process.
- learning builds on what they already know and can do.
- new information and skills are relevant to their work and/or lives.
- the learning environment is comfortable.

When preparing a unit of training, avoid:

- including too much material for the time allowed
- focusing on simply transferring information as opposed to building skills
- using a limited number of training methods

Sequencing training activities need not be based on the order in which tasks will later be performed. In one session trainers can help the participants develop skills that relate to different tasks, and then guide them, at the conclusion of the training sessions, in putting together a sequence of actions for implementing the tasks and

using these skills. What is important is to sequence training activities so that learning builds on skills acquired previously.

The initial training should be only the first step in capacity building for the community volunteers or for others being trained. Job aids such as counseling materials and manuals, as well as the program's information system, supportive supervision, and in-service training should all be viewed as tools for ongoing performance improvement.

A slightly modified version of the training plan from the Peru pilot project is found on the CD-ROM that accompanies this guide.

Technologies or Products

The availability of a new technology or product may be essential for many people carrying out essential hygiene practices. For example:

- If many young children are afraid of using latrines for fear of falling in the hole, one solution might be developing some material that would help – a sanded board that fits over the hole in existing latrines (reducing hole size), or a free or inexpensive potty for children.
- The availability of soap facilitates improved handwashing practices, although acceptable alternative cleansing agents may exist.
- While a personal cleansing material is not essential for safe feces disposal, lack of such material may constitute an important barrier to latrine use, so programs may want to facilitate its availability. In the Dominican Republic, research showed that people would use toilet paper in their latrines if it were available and affordable, so program planners worked with local groups to establish a “revolving fund” that would make low-cost toilet paper (and other hygiene products) available in the community. In Malawi, pupils collect scrap paper so that some cleansing materials are available in school latrines.
- Programs may also need to manufacture, distribute and/or sell containers for storing household water, ideally with a cover and water tap, and/or ladles for removing water from existing storage containers. Mintz et al., provides a good synopsis of household technologies for water treatment and storage.
- A Tippy Tap can facilitate handwashing in situations where water is scarce. One design is simply a plastic bottle or gourd, filled with water, capped and hung on a rope. It can be tipped to let out a small amount of water at a time for handwashing. In an alternative design, the user pours water into an empty tin can and then washes his hands in the small stream of water that exits a hole near the bottom (see illustrations below).



Tippy Taps: Made from a calabash and plastic bottle (Salubritas 9:4) and from an empty tin can (for SANRU [DRC] by M. Pongo).

- Chlorine or other water-purification products may be given or sold to families at an affordable price.

In these cases, the proper use of the technology or product is critical, requiring education/motivation on the use of technologies. In the case of major technologies such as latrines, families may be offered a choice of more than one design that satisfies both engineering criteria as well as the user preferences learned through formative research. The correct use of chlorine may require counseling as well as a printed guide depicting quantities to add to different volumes of water. In formative research, the team should learn if the chlorine available to families is always full strength or is sometimes watered down.

Hygiene products are usually available for purchase in cities and towns. The challenge, therefore, is facilitating their availability and affordability to poor, often rural, families. While there are a number of strategies to seek to accomplish this, not every one will work in each case. They include:

- Collaborate with private companies to expand promotion, distribution and sale of useful products. The prime limitation is that in some settings the poorest communities will not be addressed.
- Have community health workers, volunteers, committees, health facilities or other local groups distribute products for free or at a significantly subsidized price. This approach may require a significant program expenditure.
- Help establish a revolving fund to support subsidized sales of technologies through community stores or community health committees. Because the management and sustainability of such funds are challenges, this should be considered only where the program has the stability and resources to offer long-term support (see the discussion in Chapter 7).
- Consider the promotion of alternative, non-commercial products or useful cultural practices that may not be as effective as the preferred technologies or product but to which families have better access. Examples are soap substitutes, including local plants which aid cleansing, and solar purification of water. This is most

appropriate in subsistence regions where the commercial sector is not well-developed.

Facilitating product availability means paying attention to all aspects of marketing, including product, promotion, distribution and pricing.

Advocacy

To support its objectives, a program may need to promote changes in policy or policy enforcement, e.g., changes in community health workers' duties may be needed to facilitate their new hygiene-promotion responsibilities. Advocacy may also be required to support institutional or program strengthening, i.e., to lobby for sufficient resources for programs and organizations that support hygiene improvement.

Advocacy activities often are grouped under communications efforts, but they may well involve organizational activities that go beyond communication. A good guide is *Advocacy for Immunization: How to Generate and Maintain Support for Vaccination Programs*. Seattle: Bill and Melinda Gates Children's Vaccine Program at PATH, for the Global Alliance for Vaccines and Immunization (available on the Internet at http://vaccinealliance.org/ark/pdf/gavi_advocacy_handbook.pdf).

Community (or Collective) Actions

Individuals usually live in families and communities. Therefore other people may influence their behaviors, even intimate ones. For example, if a woman's only opportunity to talk with friends and neighbors is when all women go to the bush or fields to defecate, promoting defecation in household latrines will affect the ways in which those same women interact. This could become a potential barrier that the program, with community input, may need to address. Collective actions – such as the construction of a community latrine, establishment and management of a revolving fund for hygiene products or building or managing a local water system – may be necessary to support certain individual and family behaviors. When the program recommendation is for collective action around some hygiene issue, community mobilization is needed.

The term “community mobilization” means different things to different people. It may require an entire community, or those most affected by a problem, to get together to identify a problem, decide how to solve it and then implement the solution. The community may require outside assistance in learning and using participatory techniques to identify and solve the problem. Still, the process is driven, led, at least partially financed, and implemented by the community. This tends to be a time-consuming approach, but it may also be the most sustainable one.

At the other end of the scale, a program may tell community members what actions they need to take and how. Financing is either entirely or mostly from external sources, and the community has little if any input in how these funds are spent. This

is often the least time-consuming, but may also be the least effective and least sustainable method.

Somewhere between these two opposite approaches, a wide variety of methods may be used to encourage community decision-making and involvement. For example, in community-based growth promotion programs in several countries, mothers of young children bring their children each month to a set meeting place in the community on weighing day. Several times a year, there are community-wide meetings at which the program volunteers provide feedback on how the community's children are growing, and the group analyzes the causes of problems and plans solutions.

In a region of South Africa, families established illegal connections to the public potable water supply to avoid paying for water. Other families used water that was not safe to avoid paying for a connection. After formative research, a strategy was developed to hold meetings with community leaders to explain reasons for establishing legal connections and paying for water. The strategy included use of mass media and traditional media to explain the necessity of using and paying for water from the national water company. This required collective action on the part of some communities that were not connected to the national supply. The method used, while not participatory at the individual or family level, seemed to be effective in mobilizing the unconnected communities to levy assessments for connections and for families to pay for water.

On the other hand, a Benin project combined diarrheal disease reduction goals with support for decentralized actions – linking local levels of government with the community. The project supplied outside assistance to train local government and community members to conduct participatory research within the community, helping it to identify its own environmental health problems, analyze them, find solutions, and develop micro-projects, all of which involved collective community action. People built community latrines, established connections to the national water company, and publicly discussed and decided which hygiene behaviors people would implement at the household level to reduce the risk of diarrhea. The project financed 85% of the cost of micro-projects, while each community contributed the remaining 15%. The process took more than one year to initially implement, but accelerated as it expanded its reach. It appears to be a sustainable, effective and participatory approach to dealing with a similar problem (see Krieger and Yallou).

Institutional Strengthening and Coordination

Organizations implementing and supporting hygiene improvement may need technical, financial and material resources to carry out their tasks effectively. These requirements, as well as coordination with potential partners, should be considered in advance when determining invitations to participate in strategy formulation and implementation. Partnerships with private-sector companies, particularly private manufacturers and distributors of essential hygiene products such as soap, may be

appropriate, as long as such arrangements truly facilitate the products reaching the poor families who are most in need.

Worksheet: Workplan Format

Strategy Component: _____

Type of Activity (WHAT)	Steps (WHAT)	Approximate Dates (WHEN)	Staff Needed (WHO)	Partners (WHO)	Technical Assistance Needed (WHO)	Resources Needed (HOW)

Sample Worksheet: Workplan Format

Strategy Component: Communications

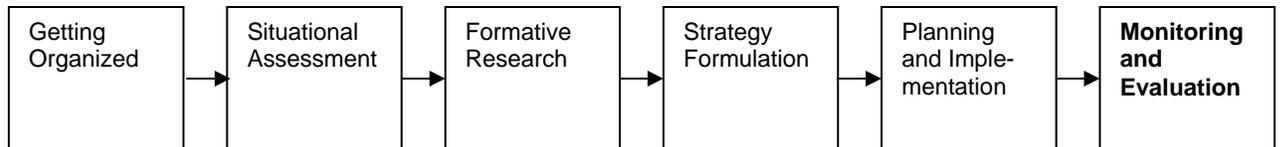
Type of Activity (WHAT)	Steps (WHAT)	Approximate Dates (WHEN)	Staff Needed (WHO)	Partners (WHO)	Technical Assistance Needed (WHO)	Resources Needed (HOW)
Prepare radio spots for broadcast	<ol style="list-style-type: none"> 1. Select topics 2. Draft messages 3. Identify and hire actors 4. Record 5. Pretest 6. Revise 7. Test new messages 8. Negotiate/make arrangements with radio stations (including broadcast schedule and payment) 9. Record spots 10. Distribute recordings to radio stations 11. Set up mechanism to monitor times played 	April – May 2004	<ul style="list-style-type: none"> • Communications staff • Radio personality / actors • Studio staff 	UNICEF Radio station	None	<ul style="list-style-type: none"> • Recording studio • Air time • Radio personality
Prepare radio announcements for broadcast	<ol style="list-style-type: none"> 1. Select topics 2. Draft messages 3. Record 4. Pretest 5. Revise 6. Test revised announcements 7. Negotiate/make arrangements with radio stations (including broadcast schedule and payment) 8. Record 9. Distribute recordings to radio stations 10. Set up mechanism to monitor times played 	April – June 2004	<ul style="list-style-type: none"> • Communications staff • Studio staff • Radio DJ 	UNICEF Radio station	None	<ul style="list-style-type: none"> • Recording studio • Air time

Sample Worksheet: Preparing for Implementation

Strategy Component: Training

Type of Activity (WHAT)	Steps (WHAT)	Approximate Dates (WHEN)	Staff Needed (WHO)	Partners (WHO)	Technical Assistance Needed (WHO)	Resources Needed (HOW)
Training of trainers	<ol style="list-style-type: none"> 1. Draft agenda 2. Schedule trainings 3. Invite participants 4. Gather/ copy materials & supplies 5. Arrange logistics (including locations for practice) 	February 2004	<ul style="list-style-type: none"> • 2 trainers • 1 admin staff 	MOH	None	<ul style="list-style-type: none"> • Training locales • Per diem & transport • Training materials & supplies
Interpersonal counseling skills / use of support materials	<ol style="list-style-type: none"> 1. Draft agenda 2. Schedule trainings 3. Invite participants 4. Gather/ copy materials & supplies 5. Arrange logistics (including locations for practice) 	April–May 2004	<ul style="list-style-type: none"> • 3 training teams / 2 trainers each • 1 admin staff per team 	MOH	None	<ul style="list-style-type: none"> • Training locales • Per diem & transport • Training materials & supplies
Community drama	<ol style="list-style-type: none"> 1. Draft agenda 2. Schedule trainings 3. Invite participants 4. Gather/ copy materials & supplies 5. Arrange logistics (including locations for practice) 	May-June 2004	<ul style="list-style-type: none"> • 2 training teams, 2 trainers each • 1 admin staff 	UNICEF	None	<ul style="list-style-type: none"> • Training locales • Per diem & transport • Training materials & supplies

9. Monitoring and Evaluation



Monitoring and evaluation are designed to obtain feedback on program actions and measure their effectiveness.

- Monitoring is the collection and interpretation of information during the course of a project. Monitoring is primarily needed to show whether:
 - specific inputs (e.g., investments, activities, decisions) are occurring as planned
 - specific inputs are leading to expected outputs (e.g., households that have soap, latrines built, people exposed to hygiene education)
- Monitoring allows for mid-course corrections to be made to help achieve program results.
- Evaluation provides a more systematic assessment of whether overall program objectives are being achieved over the long term. It seeks to measure the extent to which intended results have been achieved: for example, whether barriers have been reduced, behaviors have been changed, and ultimately, diarrheal disease prevalence has decreased. Because evaluation is an important tool in generating confidence in the program, it is usually best done by persons not working in the project, in order to ensure the credibility of the findings.

Why Monitor and Evaluate?

Clearly, monitoring and evaluation take time and costs money. Nevertheless, such investments are worthwhile if findings are used to improve the current or subsequent program. This may seem obvious, but too often program managers do not take full advantage of monitoring and evaluation data to improve their program. Therefore, meetings of key staff and partners, to review findings of monitoring and evaluation activities and to make changes as required, should be included in the project work plan and held on a regular basis.

What Should Programs Monitor and Evaluate?

At the programmatic level it is essential to monitor progress and to evaluate key results (behavior change and, ideally, improved health) to ensure that investments are resulting in benefits. However, it is sometime difficult to clearly demonstrate improved health – particularly in the short term. Instead, it is often more practical to measure service coverage, use of facilities and hygiene behaviors, specifically, behaviors that have a proven impact on health trends over time.

Uses of Monitoring and Evaluation

	Monitoring	Evaluation
Program planning, development and design	Include time and resources needed in project plans for monitoring	Establish a baseline reference point (quantitative data collection)
Program implementation	Assess whether the program is on track, delivering services, conforming to standards and targeting the right people (establish a routine monitoring system) Motivate communities to solve problems (by providing feedback to individual communities on their progress and status) Quality assurance (through supervision and self-assessment)	Check whether implementation has occurred as planned and is progressing towards program objectives (mid-term evaluations or periodic reviews can be used to implement mid-course corrections) Solve technical or programmatic problems (through operations research)
Impact evaluation	Monitor what works, why, who benefits most and relate this qualitative information to program impact	Assess whether projects resulted in the desired impact and outcomes (final evaluations covering quantitative and qualitative assessments)

Monitoring

The focus on monitoring is consistent with the principle of Behavior-Centered ProgrammingSM that successful programs require ongoing collaboration between program staff and individuals, families and communities. It is not only important to know “how things are going” and “what problems need correcting” but also to gauge how behaviors are shifting over time, and consequently, what changes in program information, messages and actions may be needed.

“How is the program working?” To answer this question, monitoring should be carried out regularly throughout the program’s implementation. Ultimately, monitoring should inform program staff about whether activities are happening as

planned and whether trends in behavior are moving in the intended directions. In doing this, monitoring can answer specific questions: Have materials been distributed to the users? Has training on counseling been conducted as planned? Are health workers or volunteers making home visits, using materials and using them correctly? How does the intended audience feel about the activities taking place? Do people understand the messages and discussions? Are there any negative reactions to the messages, materials or activities? Have people begun to follow the program advice? To what extent have people tried recommended practices and integrated them into their regular routines?

As discussed under Community Mobilization in Chapter 8, the collection and clear presentation of key information to each community – including information gained while monitoring the program – can be a powerful stimulus to encouraging community analysis, planning and action.

Project staff can make special monitoring trips to a few communities, health centers or other places where the program is being implemented. They should also incorporate monitoring tasks into existing activities. Community volunteers can also be responsible for some aspects of monitoring, including data collection, self-assessments and observing the effects of media or other activities (e.g., observing community members listening to the radio station at scheduled times or observing pupils handwashing at their schools).

Good planning, including sufficient funds, is essential for monitoring. The necessary time, budget, and capable human resources should be identified and committed before program interventions actually begin.

Routine Monitoring

Some monitoring is ongoing as part of the natural progression of the program – a result of routine supervision of personnel and activities, the utilization of the project's information system, visits to project communities, and meetings with program staff, collaborators and partners. Managers should systematically be monitoring specific project milestones such as training sessions held, commodities received and sent on to the field, etc. Health staff and, if feasible, volunteers should prepare and send routine monthly reports, which also become an important part of the routine monitoring process.

- Where radio is used, someone needs to monitor that radio spots are actually broadcast as scheduled. This requires tuning in at designated times and keeping a record of the timeliness and completeness of the broadcast, clarity of reception and other appropriate observations. Radio spot monitors can be program staff members, but often programs recruit listeners to do this type of monitoring on a part-time basis.
- The three hygiene pilot projects described in this guide use intensive, regular monitoring: volunteers monitor each family's behaviors and agreements to

change, with this information tabulated monthly at the community and project levels. Volunteers make spot visits or take small-scale household surveys using a short questionnaire that focuses on only a few behaviors and actions at a time. The content of these questionnaires is changed regularly to cover all key behaviors and essential actions.

- At monthly meetings of the project team with community promoters, reviews are held of home visit records and promoters' skills, and assessments are made of their motivation, leading to discussion of problems and solutions. (The forms and procedures for such intensive monitoring are available [in Spanish] on the CD-ROM that accompanies this guide.)

Instruments for routine monitoring through supervision and reporting may include the following:

- Monthly reports
- Records from periodic meetings with program staff and volunteers
- Observer checklists from training sessions
- Observer checklists from counseling by community workers
- Spot checklists of distribution points for products
- Spot checklists of distribution end points for materials
- Monitoring records for program materials on the radio
- Notes from meetings with participant groups to capture their opinions (see discussions of focus groups in Chapters 5 and 6)

A sound routine monitoring program that provides regular and systematic feedback can reduce the need and frequency of more intensive monitoring efforts.

Periodic Monitoring

In addition to routine monitoring activities through the supervision and information systems, periodic reviews of project activities and their results should also occur. Two basic approaches to periodic monitoring include small-scale (quantitative) surveys and rapid (qualitative) assessments.

Small-scale surveys (sometimes called tracking studies) of change agents and families members should occur at fixed intervals, i.e., approximately every six months. These surveys provide program management with regular, *quantitative* measures of the evolution of project activities and changes in barriers, behaviors, and, to some degree, insights into health impacts. While such tracking may yield useful information, it may also be costly and burdensome to implement. In large projects, a meaningful sample may be quite large, and in small projects, repeatedly asking the same questions to the same people may bias responses.

An alternative approach involves regular, rapid – but mostly *qualitative* – assessments, the focus of which may change as the program evolves. While such studies may also include a systematic examination of data from the project information system and collection of quantitative information, they should primarily consist of individual and group interviews with the range of persons involved in the program.

- The first such monitoring event should take place within a few months after the initiation of project implementation. The focus should be on program inputs: whether training occurred as planned, materials were produced and are in the field, if they are being used as intended, if home visits or meetings are occurring as intended, etc.
- The second monitoring event should take place six to 12 months later. It may focus on primarily on the change agents – their motivations, skills, comfort with their tasks, problems they are encountering, etc. – as well as families’ experiences with and reactions to program activities and messages.
- Additional monitoring events, conducted at subsequent six to 12 month intervals, might repeat some of the same questions and also look for evidence of real changes in hygiene practices.

Although potentially very important for obtaining feedback and making important adjustments to program activities, materials and messages, these monitoring activities should require a week or less of fieldwork and involve only a small portion of the communities covered by the larger program. Fifty to 100 families is sufficient.

In the Dominican Republic, *participatory monitoring* is used, employing a combination of both quantitative and qualitative approaches. In participatory monitoring, program staff contact key people at all levels in the program area, measuring selected key “sentinel” behaviors, rather than focusing on each sub-behavior. Importantly, the initial monitoring visits often focus on the main change agents working with families. If problems surface at that level, they must be addressed before continuing the monitoring. Of course, during the process, the perceptions of mothers and families must also be addressed.

Monitoring Hygiene Behavior Change in the Dominican Republic

In December 2001 and May 2002, surveys were conducted as part of a hygiene behavior change project in nine communities in the eastern Dominican Republic. These surveys were to provide NGO program managers and communities with timely information about changes in diarrhea prevalence and hygiene behaviors before and after water and hygiene interventions (that focused on home counseling by volunteers) were introduced. Considered “participatory monitoring,” these surveys were not intended to be a scientifically rigorous program evaluation.

Of the 165 children under five years of age included in the baseline sample, 27% were reported to have had diarrhea within the previous two weeks. Five months later, this fell to 11% for the 209 children included in the mid-term survey. Although the overall reduction was found to be statistically significant, it may also have reflected seasonal variations.

Most of the 41 targeted sub-behaviors showed statistically significant improvements. Increases in handwashing after going to the bathroom, as reported by the primary caregiver, improved by 12% for the caregiver and 16% for the youngest child. An increase from 15% to 31% was recorded for reported handwashing of the youngest child before eating. Use of soap improved from 59% to 79%. Also, there appears to have been a trend of improved handwashing technique. Demonstrations showed an increase in the proportion of respondents who rubbed their hands together three or more times, from 47% (at baseline) to 77% (at mid-term). There was an increase from 17% to 30% in families with a permanent handwashing area. Changes in place of excreta disposal were minimal, but positive changes were found in sanitation hygiene and teaching children about sanitation use.

No significant changes were detected over the study period for caregivers reporting handwashing before food preparation, before eating, after cleaning a child who has defecated or before breastfeeding.

Adapted from Kolesar et al.

Evaluation

Household surveys carried out before (baseline) and after a substantial period of program implementation provide a quantitative measure of program impact. Along with periodic monitoring, the final evaluation should seek to explain the degree to which the project implemented activities as planned as well as the impact of those activities on the targeted practices and health status.

An evaluation can demonstrate:

- the degree of success in meeting project goals
- unexpected outcomes
- magnitude of health impact
- relative success of different interventions
- relative success among different population groups

Evaluation findings are more meaningful if surveys are conducted in both program areas and control areas, i.e., areas where the project did not work but that have similar socio-economic characteristics, hygiene practices and resources at baseline. Comparisons can then be made and conclusions drawn about whether specific behavioral and other changes resulted from the project or from other factors. Of course, using control groups makes evaluation research more costly and complicated and thus, may not make sense for small programs with limited resources.

To have more confidence in measured changes in hygiene practices related to diarrheal disease, programs should undertake surveys at the same time of the year (e.g., before, during or after the rainy season), because illnesses like diarrhea vary substantially by season.

Household surveys should include measurements of:

- key behaviors the program is promoting
- key barriers that the program has sought to address (e.g., negative attitudes or beliefs, lack of resources, etc.)
- diarrhea prevalence (wherever possible, measured in the same season).

Even without a control group, measurements can be compared among people within the project area including those most and least reached by the program activities. For example, if 20% of people in participant groups were not reached, this should be acknowledged; however, it is also important to report outcomes among people who did participate and to assess the impact of level of participation on hygiene behavior change and improvement.

Behavior-Centered ProgrammingSM, generally recommends that the baseline survey be conducted after developing the program strategy but prior to launching the program (see box). This will help ensure that the baseline measures the specific behaviors and determinants of the behaviors that the strategy has targeted for change.

When to Conduct a Baseline Survey?	
<i>Before the formative research</i>	<i>After the formative research and strategy formulation</i>
<ul style="list-style-type: none"> • This avoids the possibility that formative research may “contaminate” responses on the baseline, a potential pitfall particularly in small projects. • If the baseline takes longer than planned, it will not delay implementation. 	<ul style="list-style-type: none"> • This allows the baseline to focus on (and quantify levels of) the specific targeted practices and the major supports and barriers on which the program will focus, so that evaluation findings better reflect the results of program actions. • This allows participant groups to have more input into the issues, concepts and expressions used in the survey instrument.

The first evaluation survey should be conducted one to three years from the date of the initial baseline survey. If a program is sustained over many years, periodic surveys (for example, every three years) may be planned to help guide the program’s

overall direction. Evaluation findings should reveal the project's impacts on behaviors, their major determinants, and health status. Ideally, an evaluation will indicate which specific project actions or communication channels had the most impact. It should give direction for modifying the existing program or designing a more effective follow-on program.

Household surveys are standardized and apply to all population groups targeted by a program; generally, they cannot be adapted to capture minute cultural and ethnic differences. To yield valid and reliable information, careful sampling is critical in selecting households to be interviewed. Commonly used survey designs that are also applicable to hygiene improvement involve these three types of sampling procedures:

- Cluster sampling – involves a systematic sampling process that is rapid and less costly than a true random sample but that yields less precise estimates and generally only for the program as a whole. Typical applications involve households at the district or national levels. Questionnaire size varies widely. Teams external to the program often carry out cluster sample surveys.
- Lot Quality Assurance Sampling (LQAS) – takes small random samples from many different communities or other relatively small sampling units and yields local as well as program-wide estimates. It employs short questionnaires and is usually carried out by program personnel.
- Purposeful selection – might be used by community workers or supervisors for spot visits to a few households. Because it does not involve any form of random sampling, it cannot objectively ascertain progress or change in a way that is grounded in survey science, although it may serve as a rough orientation of how things are going.

This guide does not include information about survey design and implementation, such as sampling, supervision, logistics, budgeting, questionnaire testing, enumerator and supervisor training, data analysis, and water testing. However, excellent reference materials exist for designing and conducting household surveys using the first two types of sampling approaches (KPC 2000+ and LQAS from NGO Networks for Health). They are available on the CD-ROM that accompanies these guidelines.

These reference materials provide those who are planning and implementing a household survey with estimates of an appropriate sample size depending on the sampling approach chosen. The size of a sample determines the precision of the estimate for each indicator. A common cluster sample survey includes 210 households per district – 30 clusters with seven households per cluster – or some other larger sampling unit, and yields a precision of roughly $\pm 5\%$. LQAS surveys may include as few as 100 households to as many as several hundred households, depending on the number of survey units. Often, communities or some other smaller sampling units are involved with approximately 20 households per survey unit, and the LQAS survey will yield a precision of $\pm 5\%$ or better. If comparisons between different population subgroups are involved, the sample size may have to be considerably larger for either of these two sampling approaches to be valid.

Evaluations are often conducted by third parties not associated with the program to heighten the credibility of findings. Moreover, since surveys are intensive and time-consuming, they can distract program staff from project management and implementation. Program staff may still participate in these surveys, but only if independent oversight is assured. This helps to improve the understanding of the project and a commitment by program staff act on its findings, while providing the evaluation team with insights on the project from the program manager’s perspective.

Program planners may find it helpful to use the “Monitoring and Evaluation” worksheet, below, to help organize their planning for this phase.

Indicators for Monitoring and Evaluation

When designing indicators, it is helpful to think in terms of “**SMART**” indicators, that is, ones that are:

- **Specific**
- **Measurable**
- **Attainable**
- **Relevant**
- **Time-bound**

These indicators should be as specific as possible and reflect aspects of behavior that the project intends to affect. They also should be measurable and unambiguous (independent of who is collecting the data), attainable (achievable by the project), relevant (feasible for the project considering the cost to collect data using these indicators), and time-bound, meaning that the time when a change is expected should be included in the indicator (Sphere Project – www.sphereproject.org).

Many indicators already exist and have been tested and applied by many programs, indicating their reliability and validity for use. Users of this guide may want to start with these existing indicators before creating new – and likely untested – indicators. The Assessing Hygiene Improvement Guidelines published by USAID/EHP (Kleinau et al.) seek to help program planners and managers design, implement, monitor and evaluate water supply, sanitation and hygiene interventions. They cover many of the behaviors and sub-behaviors presented in this guide. These guidelines provide easy access to up-to-date information about appropriate indicators and data collection instruments to systematically monitor and evaluate water supply, sanitation and hygiene interventions. The collection of quality data about hygiene improvement is an important step toward better use of information, for example, to develop hygiene improvement program strategies and work plans, design community participation and mobilization approaches, and prepare monitoring and evaluation plans. The guidelines are part of a series of publications intended to strengthen the planning, implementation, and monitoring and evaluation of hygiene improvement

interventions, and include the Hygiene Improvement Framework advocacy document (Environmental Health Project).

The Assessing Hygiene Improvement Guidelines describe 57 indicators and include several hundred model survey questions for measuring hygiene improvement comprehensively at the household and community levels. Most of the indicators and survey questions measure behaviors, sub-behaviors or household technologies that facilitate hygiene behavior. The indicators and survey questions are based on the best available knowledge from numerous surveys, including the Demographic and Health Surveys and instruments focusing on water supply, sanitation and hygiene used by the Environmental Health Project and the London School of Hygiene and Tropical Medicine.

The health impact indicator measures prevalence of diarrheal disease – the health outcome that all hygiene promotion interventions seek to improve. The essential family practice indicators measure changes in those key hygiene behaviors that contribute to the greatest health impact. Not all programs address all four of the essential family behaviors listed below. However, it would be advantageous to measure these related indicators because, when taken together, they provide a more complete picture of the current status of hygiene behavior while identifying important gaps in those behaviors. The four essential family practices are:

- Wash hands properly with soap (or a local alternative) at critical times (includes the availability of essential supplies for handwashing, especially soap)
- Dispose of all feces safely – especially those of young children who cannot easily use a toilet
- Practice safe drinking water management in the household (this includes the use of an improved water source, safe water storage, and possibly, water treatment at the point-of-use)
- Practice safe food management in the household

Selected behavior and knowledge indicators are separated into categories according to the Hygiene Improvement Framework, presented in Chapter 1. They include the following:

Access to Hardware	
Priority Indicator: Percentage of households that use improved sanitation facilities	
Sanitation and Solid Waste	
<ul style="list-style-type: none"> • Percentage of households that have child-friendly feces disposal facility • Percentage of households that have a hygienic solid waste disposal system 	
Household Technologies and Materials	
<ul style="list-style-type: none"> • Percentage of households that have soap • Percentage of households that have water-treatment supplies • Percentage of households that use a safe method for transferring drinking water from a container • Percentage of households that have covered and narrow-neck water storage containers 	
Hygiene Promotion	
Priority Indicator: Percentage of caretakers who report having used soap for handwashing at least at two critical times during past 24 hours	
Knowledge and Attitude	
<ul style="list-style-type: none"> • Percentage of caretakers who know at least two ways to prevent diarrhea • Percentage of caretakers who know at least two danger signs of diarrhea • Percentage of schoolchildren who know at least two ways to prevent diarrhea • Percentage of caretakers who know how to treat drinking water • Percentage of caretakers who know at least two reasons why it is important to wash hands with soap • Percentage of caretakers who say that the community can do something together to prevent diarrhea 	
Reported Behavior	
<ul style="list-style-type: none"> • Percentage of caretakers who know critical times for handwashing • Percentage of households using a properly cleaned sanitation facility • Percentage of caretakers who clean their water storage containers at least once per week • Percentage of caretakers who had contact with health experts about water, sanitation or hygiene during past month 	
Communication	
<ul style="list-style-type: none"> • Percentage of caretakers who have heard hygiene promotion activities • Percentage of caretakers who report that messages are understood and useful 	
Enabling Environment (priority indicators)	
<ul style="list-style-type: none"> • Percentage of households that know whom to contact about hygiene • Percentage of households that know of committee dealing with hygiene • Percentage of households that participate in committee • Percentage of households involved in water/sanitation/hygiene problem-identification and problem-solving exercises 	

Outcome indicators may also include individual or group roles, responsibilities and capabilities, particularly if changing these is an important program objective in addition to hygiene-improvement and diarrhea-reduction objectives. Several examples of such indicators are included at the end of the monitoring and evaluation worksheet below.

Monitoring the prevalence of practices can be a challenging task if the practices are not easily observable. It is helpful to think about each step in the behavior – and where there is currently a problem – and find a proxy indicator that is, in fact, observable. For example, if the practice is adequate handwashing, it may not always be possible to observe actual washing, but it could be possible to look for the presence of a ready source of water, some kind of soap and places to wash near the toilet and where food is prepared.

In addition to the indicators listed above, process indicators can be used to measure whether activities are carried out, resources are made available, products are produced and materials are developed. For example:

“Two health workers in each of the 10 health centers serving the district have been trained in improved interpersonal communication.”

“Toilet paper is regularly available in local stores.”

“Each community volunteer has received a full set of counseling cards.”

The selection of indicators and assessment questions is just one step in a longer process (e.g., use of a household survey), which is summarized below. Several of these steps are important to ensure that all necessary data are collected for indicators relevant to a program, and at the same time to ensure that the assessment is not burdened by unnecessary questions. While similar steps to those previously mentioned are involved for planning and conducting an assessment, the process for an initial situation analysis and needs assessment will be less complicated than for a household survey.

1. Select key indicators based on program objectives and expected results.
2. Determine what data are needed to measure the selected indicators and the information required for selecting a sample.
3. Develop the overall design for the assessment including geographic focus, methods of data collection, sampling approach, personnel needs, budget and assessment plan, indicating deadlines and responsibilities. Consider the purpose of the assessment, required levels of precision, resources and information available.
4. Develop an assessment instrument based on model questions related to each indicator.
5. Clarify limitations of the selected indicators, questions and data collection methods.
6. Develop an assessment guide including an annotated instrument and training materials.
7. Complete sample selection, to the extent possible using available information.
8. Develop a data entry and analysis plan.
9. Translate the assessment instrument and then re-translate into the original language to correct translation errors.

10. Train the assessment team, which may include enumerators, interviewers, supervisors, field coordinators and data entry personnel, as well as support staff such as drivers and secretaries.
11. Pilot the assessment instrument and make final corrections.
12. Conduct the survey.
13. Perform data entry and analysis according to the analysis plan and prepare a report and presentation.
14. Present findings; discuss the experience, including conducting the assessment and lessons learned. Disseminate results.
15. Plan subsequent assessments, taking lessons learned into account and ensuring the comparability between assessments done at different times and in different locations.

Worksheet: Monitoring and Evaluation Indicators

EVALUATION		<i>MONITORING (COMMUNICATIONS COMPONENT)*</i>	
Health Outcomes (if the project will measure; take from project documents)	Indicators	Feasible Practices (if any can be observed or otherwise monitored on a regular basis)	Indicators
Feasible Practices (from the strategy framework)	Indicators	Expected Outputs (from the workplan: materials distributed, used, etc.)	Indicators
Main Barriers & Supports (from the strategy framework)	Indicators		

*Create monitoring indicators for each component of the strategy

Worksheet: Monitoring and Evaluation Plan

INDICATORS	Data Requirements	Source	Frequency	Person Responsible
Health Outcomes				
% reduction in diarrhea in children under 5 years old	# of children under 5 with diarrhea in past 2 weeks/ Total # children under 5 years (surveyed)	Survey	Baseline and final	M&E unit
Practices				
% of caretakers who wash hands before preparing food and feeding a child, after defecation & after attending a child who has defecated	# of caretakers who usually wash hands at key times/ Total # of caretakers of children under 5 years	Survey	Baseline and final	M&E unit
% of caretakers who throw feces of children under 36 months into latrines	# of caretakers who usually throw feces of children under 36 months into toilets/Total # of caretakers of children under 36 months	Survey	Baseline and final	M&E unit
% of children ages 3 to 9 who use a toilet to defecate	# of children ages 3 to 9 who usually defecate in toilets/ Total # of children ages 3 to 9	Survey	Baseline and final	M&E unit
% of households without access to piped water who treat drinking water by chlorination, boiling or solar disinfection	# of households without access to piped water who treat drinking water/ Total # of households without access to piped water	Survey	Baseline and final	M&E unit
Main Barriers & Supports				
% of homes with a special place for hand- washing	# of households in project area with handwashing facilities/# of households	Survey Observations (in CHW checklist)	Baseline and final Quarterly	M&E unit Project manager

INDICATORS	Data Requirements	Source	Frequency	Person Responsible
% of households with a place for handwashing that have soap	# of households with soap at the place for hand- washing/# of households with a special place for handwashing	Survey Observations (in CHW checklist)	Baseline and final Quarterly	M&E unit Project manager
% of households with access to a functioning toilet	# of households in project area with functioning toilets/ # of households	Survey Observations (in CHW checklist)	Baseline and final Quarterly	M&E unit Project manager
% of households that have access to safe water sources	# of households in project area that draw water from a piped source or covered well/# of households	Survey Observations (in CHW checklist)	Baseline and final Quarterly	M&E unit Project manager
% of caretakers who regularly wash their water storage containers	# of caretakers who washed their water storage container in the past 3 days/# of caretakers	Survey	Baseline and final	M&E unit
% of caretakers who know the critical times for handwashing	# of caretakers who can name four critical times for handwashing/# of caretakers	Survey	Baseline and final	M&E unit
% of caretakers who know how to store water properly	# of caretakers who can explain proper water storage/# of caretakers	Survey	Baseline and final	M&E unit
Important Process Indicators				
% of households regularly visited by community volunteers	# of households that have been visited by volunteers at least X times since (e.g., the rains began)/# of households	Survey	Baseline and final	M&E unit
% of communities involved in collective action	# of communities currently working on a collective project to improve hygiene/total # of communities	Survey	Baseline and final Monitoring	M&E unit

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