DEVELOPING HEALTH AND FAMILY PLANNING PRINT MATERIALS FOR LOW-LITERATE AUDIENCES:

A GUID

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Margot Zimmerman, Nancy Newton, Lena Frumin, Scott Wittet

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The Program for Appropriate Technology in Health (PATH) is a private, nonprofit, international organization dedicated to improving the safety, availability, and acceptance of health products and technologies worldwide. PATH focuses on developing new technologies and improving existing ones by adapting them to the cultures in which they are used.

PATH's headquarters are in Seattle, Washington. PATH's Communication Department is based in Washington, D.C. Field offices are located in Bangkok, Thailand, and Jakarta, Indonesia.

For more information on PATH, please write to:

PATH
4 Nickerson Street
Seattle, Washington 98109-1699

For more information on PATH's Communication activities, please write to:

Communication Department
PATH
1990 M Street, N.W., Suite 700
Washington, D.C. 20036

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Since 1978, the Program for Appropriate Technology in Health (PATH) has collaborated with over 40 organizations worldwide in an effort to increase knowledge and understanding of health and family planning interventions. With the staff of these organizations, and the patience of their clients, PATH and its sister organization, the Program for the Introduction and Adaptation of Contraceptive Technology (PIACT), have used and refined techniques for the development of appropriate print materials. The techniques outlined in this *Guide* can be used to develop materials on any health or family planning topic for almost any audience. These techniques can also be adapted and used to develop materials on other subjects in any media.

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- **Low-literate people have some reading and writing skills.**
- **Non-literate people come from cultures without written languages.**

I. INTRODUCTION

Twenty-eight percent of the world's adults cannot read or write. This proportion is even higher in developing countries. Over half of Africa's adult population is illiterate; there are African countries in which 90 percent of the men and women cannot read or write.[14] But low-literate populations are not confined to the developing world: in the United States, it is estimated that one out of every five American adults has reading skills below the fifth grade level.[4]

Women currently comprise 60 percent of the world's illiterate population, and the number of illiterate females is growing faster than that of males.[2] Research has shown that in most economic settings, the children of literate women have a better chance of survival than those of illiterate women.[12]

In terms of sheer numbers, the world's illiterate population is actually rising.[15] It is often precisely this group that is most in need of information on health care, agriculture, sanitation, water management, nutrition, and other aspects of development. The inverse relationship between female literacy and infant mortality reinforces the need to develop informational materials designed specifically for low-literate groups.

Mass media, such as radio and television, have been successfully used in some areas. Traditional folk media, including puppet shows, theatre, and songs, are also valuable. However, while these techniques can augment and reinforce interpersonal communication, none of them can replace the interactive learning possibilities afforded by face-to-face communication. Carefully designed print materials can be used to support the interaction between health workers and clients; hence, these materials may be called "support materials."

This manual offers guidelines for developing health and family planning support materials for illiterate and low-literate groups worldwide. The Program for Appropriate Technology in Health (PATH) uses materials development techniques which rely heavily on the involvement of the audience for whom the materials are intended (the target audience). Qualitative research techniques, such as focus group discussions (FGDs) and in-depth interviews, can be used to assess the knowledge, attitudes, and practices of a target audience with respect to a particular health or family planning product or behavior.

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As informational materials are prepared--from the initial identification of need through the development of messages and the production of the piece itself--repeated interaction with representatives of the target audience is undertaken to ensure that the materials produced are accurate, well understood, and responsive to the audience's needs and concerns. Fieldworkers and program managers should also be included in the materials development process to ensure that the final product meets their criteria and to give them a sense of "ownership" of the materials, thus increasing the likelihood that they will use the materials and will encourage others to do so.

There are many advantages to using print materials in the information, education, and communication (IEC) components of health and family planning programs. Print materials:

- Come in many forms, such as booklets, package inserts, posters, fliers, coloring books, comic books, and flip charts.
- Are easy to store and can be used without any special equipment.
- Are an excellent tool to reinforce messages presented verbally during interpersonal contacts.
- Can be used as reference materials should the health provider or client forget any important messages.
- Provide a means for transmitting standardized information to an audience beyond the initial recipient, since clients often share their print materials with friends, relatives, or neighbors.
- Are usually appropriate for local production and can be tailored for specific audiences.
- Improve user comprehension. A study in Bangladesh found that one month after receiving pictorial contraceptive instruction booklets, 83 percent of the recipients still remembered when to start taking the pill, as opposed to 16 percent of the group who had received only verbal instructions.[17]
- Can counteract rumors, reduce fears of possible side effects, and reassure acceptors that health and family planning methods or other health technologies are effective and safe.
- May serve as a motivator for those who wish to improve their literacy skills.

This manual is designed to guide the reader step-by-step through the process of

developing health and family planning print materials for low-literate adults. These same materials development techniques can be used to develop radio spots, videos, or theatre programs.

Each section of this *Guide* discusses a separate step in the materials development process.

"Target Audiences" explains how to profile audiences and determine their specific needs.

"Project Planning" offers tips on formulating work plans to allocate time and financial resources.

"Audience Research" describes methods to derive information from the target audience to assess and better understand its needs and concerns, while

"Message Development" details the process of using data from FGDs and audience research to develop messages and communicate them pictorially in a clear, sequential manner.

"Guidelines for Materials Production" provides tips that can be helpful when preparing materials for low-literate groups.

"Pretesting and Revision" explains ways to ensure that the intended messages are conveyed and that the materials are acceptable to the target audience.

"Printing" raises issues to consider during the production stage of the materials development process.

"Distribution and Training" describes how to disseminate the materials and train health workers to use them effectively with their clients.

"Evaluation" describes methods to examine the field use of the materials and their impact on the intended audience.

II. TARGET AUDIENCES

A "target audience" is a specific group of people whom materials developers are trying to reach. Project staff who are responsible for developing the materials must first define the target audience in order to develop materials that address the audience's needs and concerns. "Audience Needs" discusses the informational needs of different groups; "Defining Audiences" describes how to identify a target audience by its demographic, geographic, cultural, and psychological characteristics.

A. Audience Information Needs[9]

When designing communication programs to introduce, promote, or counsel in the informed and correct use of health and family planning technologies, project staff should target the key groups that are vital to the fulfillment of the objectives of the health and family planning program. Audiences generally targeted by health and family planning personnel include policy and decision makers, program managers, clinicians, fieldworkers, and clients. These groups can be further subdivided as needed for a given program.

These main groups of service providers usually require different types of information at different levels of complexity.

Policy and decision makers need an objective presentation of a health product or contraceptive method, including its advantages, disadvantages, and the rationale for its use. Sometimes policy and decision makers need very technical data, while at other times they need only a general overview.

Program managers who are responsible for relaying information between policy makers and health workers in the community need technical information, such as contraceptive effectiveness rates, that is presented clearly and without unfamiliar jargon.

Clinicians need detailed information on how to use a product, how to counsel clients on its use, and what to do in case of complications. This will help clinicians to feel more confident about the product and to provide high quality services.

Fieldworkers need accurate and standardized educational materials to support their interactions with clients. Materials for fieldworkers are usually less technical than those for clinicians and should include information on how to counsel clients effectively.

Clients need information about the options available to them as well as the proper use and effectiveness of a health product or contraceptive method. Clients also need to know about possible side effects of any method or product they choose so that they can differentiate between symptoms that can be self-treated and symptoms that require medical attention.

Audience informational needs change depending on the audience's stage of behavior adoption of the health product or behavior being advocated. The stages of behavior adoption include: (1) awareness, (2) decision, (3) instruction, and (4) continuation. During the first stage, a potential client becomes aware of the new health behavior. Next, the client makes a decision to try it. If motivated, the client will learn how to practice the behavior and apply it to daily life. During the final stage, the client decides whether or not to continue the behavior. With this progression in mind, project staff should design messages using appropriate media to facilitate one or more of the stages of adoption.

Different media are more appropriate for certain audiences at different stages of the adoption process (see figure 1). For example, during the first phase (awareness), radio may be appropriate for reaching policy makers, program managers, fieldworkers, and clients. However, radio may not be useful for clinicians, since they need very technical information, not suited for general audiences.

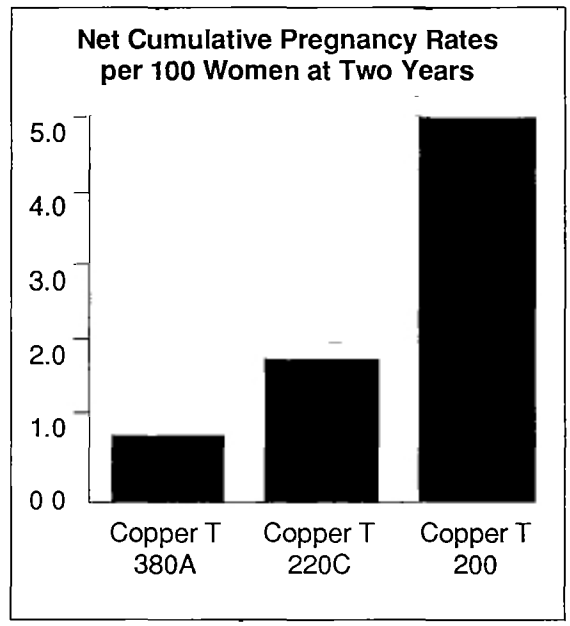
TARGET GROUP	STAGES OF BEHAVIOR ADOPTION			
	1. Awareness	2. Decision	3. Instruction	4. Continuation
Policy Makers and Program Managers	I, N, P, R, T, V	I, N, P, R, T, V	I, P, V	I, N, P, R, T, V
Clinicians: Doctors and Nurses	I, N, P, T, V	I, P	I, P, V	I, P, R, T, V
Fieldworkers	I, P, R, V (N, T)	F, I, P, R (N, T, V)	I, P, V	F, I, P, R (N, T, V)
Clients	F, I, P, R , V (N, T)	F, I, P, R (N, T, V)	I, P, V	F, I, P, R (N, T, V)

Key:
F = Folk media
I = Interpersonal communication
N = Newspaper (foreign newspapers at policy maker level)
P = Print
R = Radio (shortwave radio at policy maker level)
T = Television
V = Video
( ) = In urban areas, or elsewhere if the media is widely available

figure 1: Effective media use for different target groups and stages of behavior adoption *(Figure prepared from a concept by G. W. Perkin and L. Saunders)*

Figures 2 through 5 show examples of materials developed to introduce the Copper T 380A intrauterine device (IUD) to different audiences.

figure 2: Table from a brochure for policy and decision makers, explaining the effectiveness of Copper T IUDs *(Courtesy of the Population Council and PIACT)*



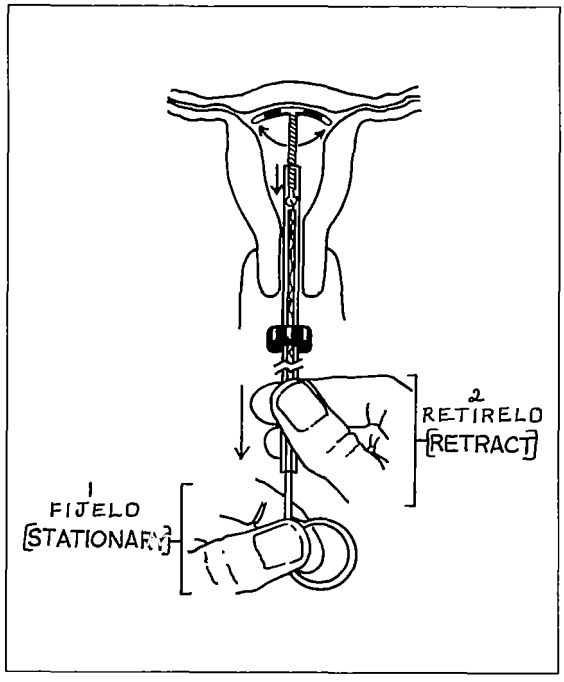


figure 3: Illustration from a booklet for physicians, showing one step in the insertion procedure for the Copper T 380A IUD *(Courtesy SOMEFA, Bogotà, Colombia and Finishing Enterprises, USA)*

figure 4: Illustration from a booklet for fieldworkers, showing that IUD insertion takes less than 5 minutes *(Courtesy of the IEM Unit, Directorate of Family Planning, Bangladesh and PIACT/Bangladesh)*

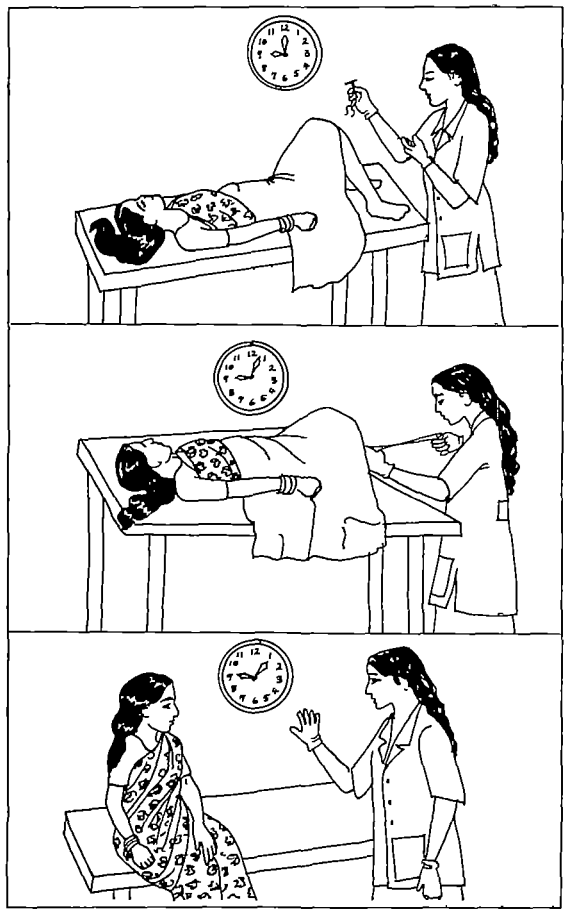


figure 5: Illustration from a pictorial booklet for low-literate clients, showing a couple choosing a family planning method *(Courtesy of the IEM Unit, Directorate of Family Planning, Bangladesh and PIACT/ Bangladesh)*

B. Defining Audiences

Carefully defining the target audience will help to ensure that the intended audience is accurately represented when research is conducted to assess knowledge, attitudes, and practices.

The audience can be defined by characteristics such as:

- Age;
- Gender (sex);
- Marital status;
- Occupation;
- Income;
- Religion;
- Ethnicity or language group; and
- Experience (e.g., those who have used/accepted a product or service versus those who have not).

If the target group includes a wide range of people, such as "rural women," it may be subdivided into smaller groups, for example, "married rural women of reproductive age who have recently discontinued family planning."

III. PROJECT PLANNING

After the project staff has identified target audiences, a work plan and budget to schedule activities and allocate human and financial resources should be developed.

A. Work Plans

An example of a work plan to develop a client booklet on a contraceptive is shown in figure 6. The time needed to complete each phase of the materials development process varies depending on the scope of the work and the number of staff devoted to the project. The time to complete the entire process can range from 6 to 18 months or more.

IEC MATERIAL DEVELOPMENT WORK PLAN

ACTIVITY	Month 1	2	3	4	5	6	7	8	9	10	11	12
I. Recruit and interview personnel	x											
II. Train staff	x											
III. Recruit FGD participants	x											
IV. Hold FGDs (e.g., 2 FGDs for each category; total: 8 FGDs)		x										
V. Draft materials												
a. Analyze FGD data, design messages			x									
b. Develop storyboard			x									
c. Work with artist on illustrations			x									
d. Draft the text			x	x								
VI. Pretest and revise materials												
a. Pretest, revise, and pretest further until materials are satisfactory				x	x	x						
b. Preview by interested persons and organizations						x						
c. Revise and pretest further until materials are satisfactory						x	x					
VII. Final approval by groups interested in using materials								x				
VIII. Print								x	x			
IX. Train health workers										x	x	
X. Distribution											x	
XI. Evaluation											x	→

figure 6: Sample work plan

B. Budgets

The sample budget in figure 7 shows some items to consider when estimating costs. Each project will have different budget line items and costs reflecting local resources, staffing patterns, and institutional contributions to health and family planning programs.

IEC MATERIAL DEVELOPMENT
BUDGET

Objective: Develop, field-test, revise, print, and evaluate a booklet for clients on a contraceptive as indicated in the sample work plan on page 15.

Personnel Cost	Amount in $
Project Director (.10 time at $xx/month)	
Project Coordinator (.50 time at $xx/month)	
Support staff (.25 time at $xx/month)	
Driver (.25 time at $xx/month)	
Total	
Benefits	
Consultants	
Artist (20 drawings at $xx/drawing)	
Field staff (35 days at $xx/day)	
Transportation	
For training (2 trips x 10 participants at $xx/trip)	
For FGD research (8 trips at $xx/trip)	
For field-testing (4 rounds at $xx/trip)	
For evaluation (5 trips at $xx/trip)	
Per Diem	
For training (6 days x 10 participants at $xx/day)	
For FGDs (8 days at $xx/day)	
For field-testing (20 days at $xx/day)	
For evaluation (5 days at $xx/day)	
Training	
Site (6 days at $xx/day)	
Refreshments (10 lunches, snacks at $xx/person)	
For field-testing (20 days at $xx/day)	
For evaluation (5 days at $xx/day)	
FGD Refreshments (80 snacks at $xx/snack)	
Photocopying	
Printing for booklet (3,000 copies at $xx/copy)	
Communication (telephone, telex, postage)	
Administrative/Overhead Costs	
TOTAL	

figure 7: Sample budget

IV. AUDIENCE RESEARCH

Project staff must understand the target audience in order to communicate with them effectively. Project staff must find out what the audience already knows about the topic, what kinds of rumors or misinformation they have heard, how they feel about the topic, and what kinds of questions they have. Many techniques can be used to learn more about target audiences prior to developing messages. These techniques include knowledge, attitude, and practice (KAP) surveys; in-depth individual interviews; informal group sessions (or meetings); and focus group discussions (FGDs).

A. KAP Surveys

KAP surveys are used when it is important to determine what percentage of people in a community believe certain things. Because the purpose of this method is to count the number of people fitting into different categories, it is called a "quantitative" technique. Some researchers are familiar only with this type of traditional research tool.

Surveys use a series of close-ended or open-ended questions or both. Close-ended questions offer the respondent several choices when answering a question on the questionnaire. For example: "Do you use oral rehydration salts (ORS) in your home? ___Yes ___No ___No response." Close-ended questions limit the kinds of responses that can be recorded and can, therefore, bias the data gathered. For instance, what if the respondent really wants to answer, "I don't know what oral rehydration salts are"? However, close-ended questions are often used because they are easy to ask and their results are relatively easy to analyze.

Open-ended questions allow respondents to give any answer they like. For example: "What do you see in this picture?" Instead of a list of answers, a blank space is provided, and the interviewer writes down whatever the respondent says. This type of data is more difficult to analyze, since it requires the special technique of "content analysis."

Surveys require many participants, randomly selected from various parts of the community. Many interviewers are also needed. For this reason, surveys can be very expensive and time consuming. Before planning to use surveys for audience research, project staff should ask themselves whether it is really necessary to know how many people believe something, or whether it is enough to know what kinds of things people believe. In the latter case, quicker and less expensive "qualitative" research techniques may be more appropriate.

B. In-depth Interviews

In-depth interviews allow researchers to gain a great deal of insight into people's thoughts, feelings, and behaviors. Whereas a survey questionnaire may take only a few minutes to complete, in-depth interviews often take much longer because they allow the

respondent to talk at length about topics of interest. Because in-depth interviews contain many open-ended questions, they require more time to analyze.[16]

Data from in-depth interviews can be used to generate quantitative results if a large enough random sample is selected and if careful, reliable content analysis of the data is performed. If the samples are small or are not randomized to represent the community, in-depth interview data can still be used qualitatively, since the interviews will give researchers ideas about the informational needs of the community. Because of the complexity of sampling procedures and data analysis, and because of the length of the interviews, in-depth interview research can also be relatively expensive and time-consuming.

C. Focus Group Discussions (FGDs)[1,3,6,13,17]

FGDs are in-depth discussions, usually one to two hours in length, in which six to ten representatives of the target audience, under the guidance of a facilitator, discuss topics that are of particular importance to a forthcoming project or activity. The focus group is a research method borrowed from commercial marketing.[7] The results of focus group sessions are qualitative: they are an exploration of knowledge, beliefs, concerns, and attitudes rather than a quantitative tabulation of yes-or-no answers to close-ended questions. The qualitative data generated by FGDs disclose "hints" for arguments that may be used to influence the audience's behaviors or to allay their fears or doubts.

In cases where quantitative data are not needed and where resources are limited, the FGD is usually a very useful qualitative research tool. Because many people are interviewed at once, FGDs are usually cost-effective. Also, when FGD participants hear the thoughts of others, it can trigger their own memories or ideas, thereby enriching the data. However, because all the participants in the FGD can hear the opinions given by other participants, one cannot be sure that participants are giving the same kinds of answers in the group that they would give if interviewed individually. For this reason, it is invalid to count the number of people in the group who give a certain answer; focus group results cannot be quantified in this way. On the other hand, it is valid for a researcher to count the number of FGDs in which a certain idea was mentioned.

PATH has found that FGDs are often the audience research method of choice for materials developers. When designing a booklet, poster, or video, it is usually not important to know, for example, that 30 percent of the audience believes one thing about the subject, 25 percent believes another thing, and 45 percent knows nothing at all about it. No matter what the percentages are, the project staff probably would prefer to give the correct information and address misperceptions and questions. It is most important to know what the misperceptions and questions are; FGDs yield these data very effectively.

FGDs are easily tailored to suit the research needs of the project staff. For instance, FGD data can be used to:

- Develop appropriate messages for informational or motivational materials or media.
- Identify myths or beliefs about a product or practice.
- Evaluate existing materials or drafts of materials.
- Design survey questionnaires.

Conducting several FGDs with groups having similar characteristics will help to confirm findings and ensure that all common informational needs are addressed in the materials produced. In order to collect enough relevant information on a topic, two FGDs per participant characteristic are usually required. Sample participant characteristics include gender, age, and use (or lack of use) of a health or family planning intervention. (See figure 8, which is illustrative and not meant to be exhaustive.)

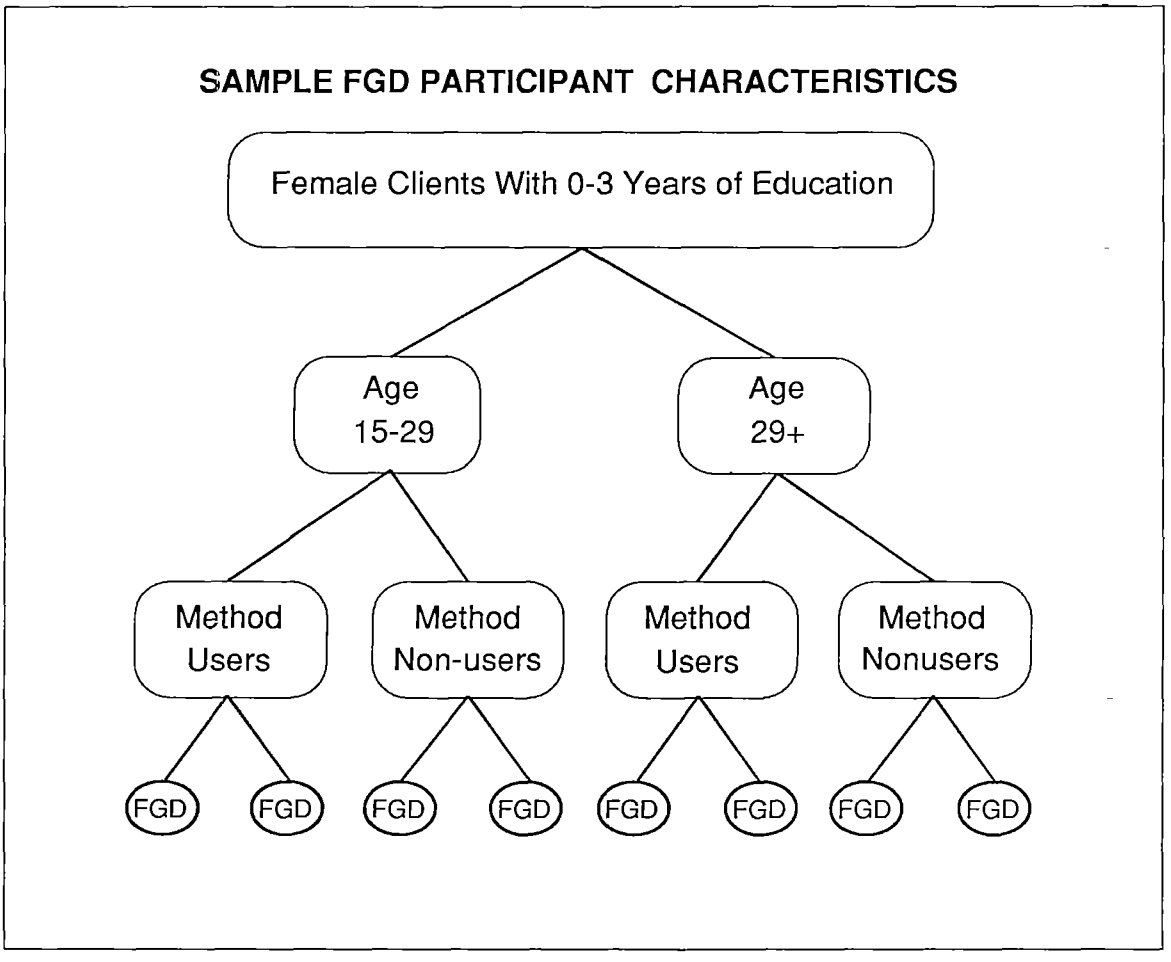


figure 8: Example of organizing FGDs by participant characteristics

Following are some guidelines for improving the reliability of FGD results:

1. FGD Participants

FGD participants should represent the audience for which the materials are intended. For best results, each focus group should contain people who share similar characteristics such as age, sex, and socioeconomic status. People are more relaxed among others with the same or similar backgrounds.

To help ensure that the responses will be spontaneous and uninhibited, participants should not know each other or be told the exact subject of discussion in advance of the FGD. The method of recruitment will depend on the situation: clinics or markets may be good places to find candidates. House-to-house recruiting is a better, albeit more time consuming, technique.

2. FGD Site

FGDs should be conducted in a quiet place that is large enough to accommodate the participants, the facilitator, and the notetaker. The setting should promote comfort and ease among group members. Participants should be seated in a circle so that the facilitator and notetaker can clearly see and hear everyone and so that there is no "head of the table" leader image.

3. FGD Facilitator

To establish rapport with the group members, the FGD facilitator should be of the same sex and speak the same language as the FGD participants and should have a thorough understanding of the topic to be discussed. The facilitator introduces topics and encourages everyone in the group to participate. The facilitator is responsible for guiding the discussion to make sure that participants do not stray from the subject. A good facilitator is personable, flexible, and has a good sense of humor. (See figure 9 on page 21.)

4. FGD Notetaker

Even though FGDs are often taped, the facilitator is assisted by a notetaker who objectively and carefully records both individual opinions and group consensus verbalized throughout the FGD. The notetaker also records nonverbal responses that could be indicative of group attitudes or sensitivities. (See figure 10 on page 21.)

5. FGD Guidelines

In order to cover all topics of interest, project staff must develop guidelines for the discussion prior to holding the FGD. Although discussion guidelines will differ depending on the group and their experiences, most FGD guidelines include: (1) introduction of the facilitator, participants, and FGD format; (2) general topics to open up the discussion;

TIPS FOR THE FGD FACILITATOR

1. Open the discussion with a statement (e.g., "We're all mothers who care for small children") and wait for participants to comment. Starting with a question can make the group expect a question-and-answer session and discourage discussion.

2. Practice a form of "sophisticated naivety" (e.g., "Oh, I didn't know that--can you tell me more about it?").

3. Make incomplete statements and wait for responses (e.g., "Well, maybe smoking isn't so...").

4. Use silence to your advantage. Do not let it be intimidating; a pause in the conversation may compel participants to talk.

5. Use "close-ended" questions to solicit a brief and exact reply (e.g., "How many children do you have?").

6. Use "open-ended" questions to solicit longer, thoughtful responses (e.g., "What have you heard about oral contraceptives?").

7. Use "probing" questions in response to a reply in order to obtain further information (e.g., "Why should a mother always use both breasts at each feeding?").

8. Avoid "leading" questions that prompt respondents to answer in a particular way (e.g., "Have you heard that IUDs are dangerous to women's health?"), unless they are part of your "probing" strategy.

figure 9: Tips for the FGD facilitator

TIPS FOR THE FGD NOTETAKER

1. The facilitator and the notetaker should work as a team and communicate before, during, and after the FGD. Before the FGD, they should carefully review the FGD guidelines together. They should agree on nonverbal cues to use discreetly during the session to indicate which comments are important to note or require elaboration. After the FGD, they should collaborate to clarify notes and compare their impressions

2. Do not let a tape recorder substitute for good note taking. Although sessions should also be tape recorded, problems during recording are very common (e.g., too much noise, dead batteries, forgetting to turn over the tape); therefore, notes should always be taken.

3. The notetaker should record only relevant information. The notetaker should summarize what is said and record useful and interesting quotations when possible. The notetaker may use abbreviations, including quotation marks under words to show repetition of comments.

4. The notetaker should observe nonverbal group feedback (e.g., facial expressions, tone of voice, laughter, posture), which may suggest attitudes to be noted in FGD reports

figure 10: Tips for the FGD notetaker

(3) specific topics to reveal participants' attitudes and perceptions; and (4) probing questions to reveal more in-depth information or to clarify earlier statements or responses.

6. FGD Session

After the facilitator and notetaker introduce themselves, the facilitator should ask the participants to do the same. The facilitator should then explain the purpose of the session. The group is likely to feel more comfortable about note taking and tape recording if first asked for permission. Assurance should be given that this is simply a way to help the project staff remember what was said and that the information is confidential and for the exclusive use of the project staff.

The facilitator should begin the FGD with general topics and then move to specific topics. The FGD guideline does not have to be strictly followed; it is used as a checklist to ensure that all the necessary items are discussed. The facilitator should allow the order of topics to vary depending on the group's interests and concerns. Toward the end of the session, the facilitator should help the group to sift through the ideas discussed in order to determine how the group stands on important issues. This is also a good time to summarize, clarify, and obtain any additional information needed.

Sometimes participants ask the facilitator questions or give incorrect information during the FGD. The facilitator naturally wants to help by answering questions or correcting errors. However, this should never be done during the FGD. Instead, the facilitator needs to throw the questions back to the group: "What do you think about Maria's question, Carmen?" If a facilitator begins answering questions during the FGD, it will cause participants to stop giving their own ideas and will turn the FGD into a teaching session instead of a research activity. If participants persist in asking questions, the facilitator should assure the group that time will be set aside at the end of the session to discuss these issues. A good general rule to observe is that the facilitator should try to speak only 10 percent of the time and listen to the participants 90 percent of the time.

Refreshments may be served to the participants before or after the FGD as a friendly gesture to thank them for their time and help.

7. FGD Data Analysis

FGD data analysis involves reviewing the statements made by participants on each topic in the FGD to determine what the target audience members already know, what misinformation they have, what they want to know, and what they need to know. FGD findings can be arranged according to the FGD guidelines. After all the FGDs have been conducted, responses can be compared according to the characteristics of the various groups. It is not appropriate to try to quantify FGD data by counting the number of participants in a group who gave similar answers. If it is necessary to generate such statistics, KAP surveys or in-depth interviews should be used instead of FGDs.

V. MESSAGE DEVELOPMENT[17]

The process of message development includes several steps. First, FGD data must be analyzed by project staff to determine the informational needs of the target audience (i.e., what FGD participants believe to be true and what they want to know). Next, messages must be designed, based on the FGD data, to address the informational needs of the target audience (i.e., what project staff think the target audience needs to know based on the research results). At this point, text can be drafted and illustrations created to communicate the messages. The text should be concise and should reinforce each illustrated message; likewise, the illustrations should help communicate the written messages.

A. Analyze FGD Data and Design Messages

Messages should be developed to address each relevant issue raised in FGDs. Project staff should list FGD data in the first column of the Message Development Worksheet (see figure 11). In the next column, project staff should list messages which address the informational needs of FGD participants. As project staff strive to make these messages consistent with program policies and activities, assistance from technical advisors can help to ensure accuracy of the messages.

MESSAGE DEVELOPMENT WORKSHEET

FGD DATA	MESSAGE	ILLUSTRATION	TEXT
A) Parents want to know what to do when a child has diarrhea.	A) Prepare ORS when child has diarrhea.	A) Young child with diarrhea. Mother emptying ORS packet into 1 litre container.	A) When your child has diarrhea, prepare a solution of ORS for her/him.
B) Parents believe that the child should not eat food when s/he has diarrhea.	B) The child should continue to drink (or be breast-fed) and eat soft foods.	B) 1. Mother breast-feeding child. 2. Father feeding child porridge; bowl on table with banana, eggs.	B) Breast-feed your child between ORS feedings S/he also can eat soft foods such as porridge, soft bananas, and eggs if s/he is not vomiting.
C) Women believe that the ORS can be kept until the pitcher is empty.	C) Any ORS not given to the child within 24 hours should be thrown away.	C) Mother pouring ORS solution into a container for waste. Child lying on father's lap. Lamp on table.	C) The ORS only stays fresh for one day and one night. Throw away unused ORS solution after this length of time and prepare fresh ORS.

figure 11: Sample message development worksheet, PATH

A good message is short, accurate, and relevant. The message tone may be humorous, didactic, authoritative, rational, or emotionally appealing. It may be intended as a one-time appeal or as repetitive reinforcement. It may provide inspiration to readers or merely attract their attention.

B. Develop Storyboard With Illustrations

Having analyzed FGD data and determined the content of the messages, project staff is now ready to create illustrations to support the text. A brief description, in words, of illustrations that best depict each message should be listed in the third column of the Message Development Worksheet.

To give the artist a clear idea of what needs to be illustrated, a sequential layout of rough sketches needs to be prepared. A storyboard (see figure 12) can help to visualize each aspect of the message and to outline the message sequence, frame by frame. Project staff can then work with local artists or photographers to determine how best to portray each message. The storyboard in figure 12 shows the artist the message that needs to be conveyed; the work of the artist is shown in figure 13 on page 25.

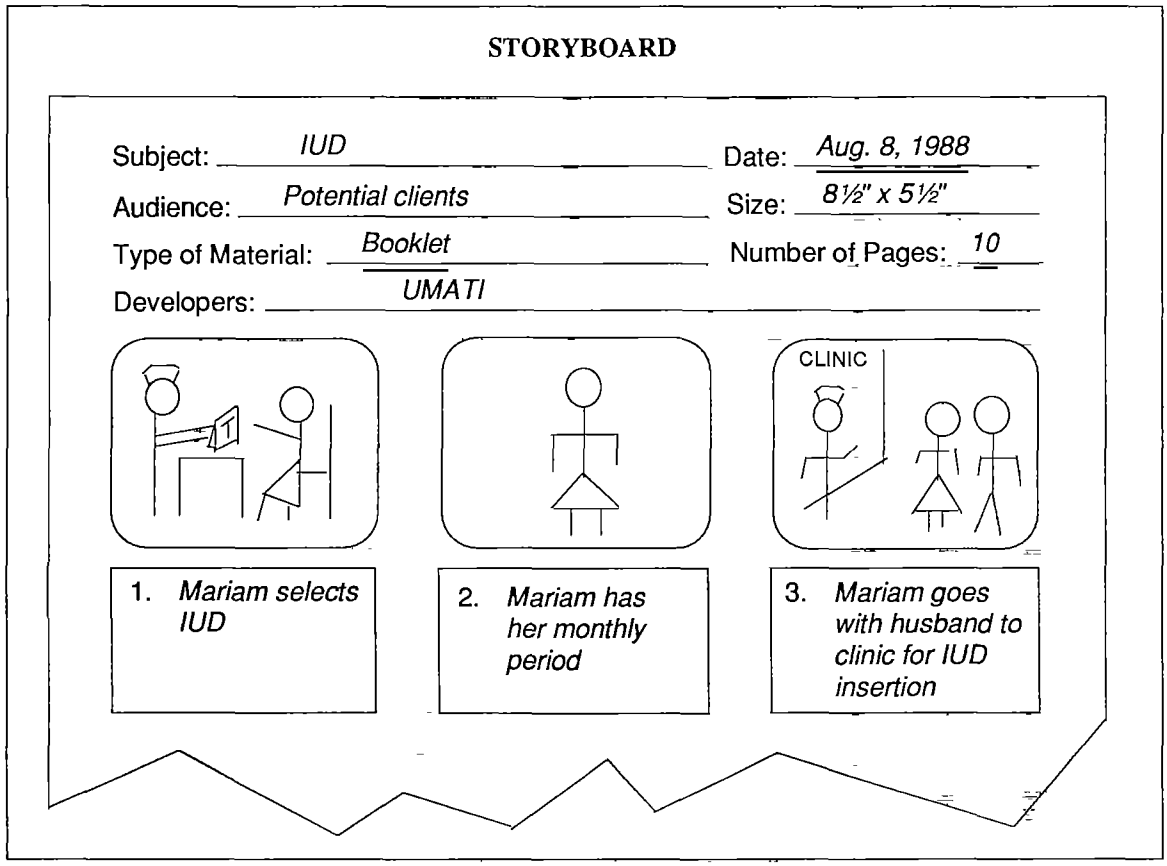


figure 12: Sample storyboard

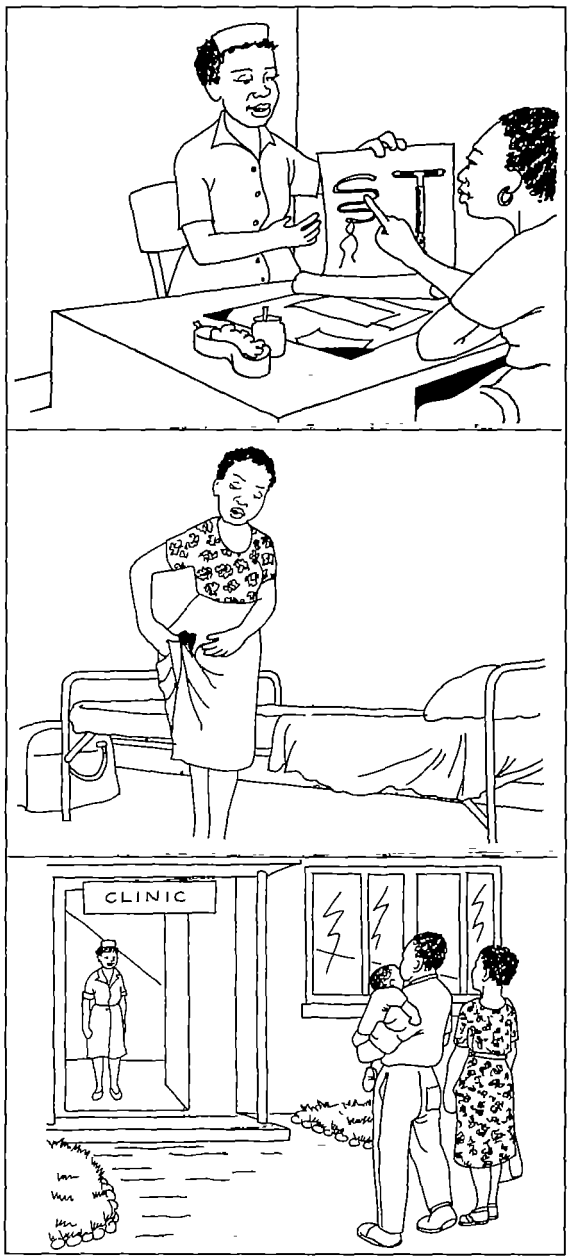


figure 13: Artwork designed from a storyboard *(Courtesy of UMATI, Tanzania)*

A. Mariam selects the IUD

B. Mariam has her monthly period

C. Mariam goes to the clinic with her husband for her IUD insertion

Project staff can prepare more than one version of the illustration or photograph if they are not sure how the message is best portrayed. This allows ideas to be compared for accuracy and effectiveness during pretesting and, ideally, results in a new illustration that combines the best elements of each.

Decisions must also be made as to what kind of graphics to use: line drawings, shaded drawings, photographs, cartoons, or other styles. Usually it is prudent to seek the advice of the target audience. This can be done through the use of individual pretests or FGDs. Identical messages, using the same symbols, should be tested in several graphic styles to determine which style is most acceptable to the audience.

C. Draft Text

Project staff should draft text conveying the messages and then write it in the fourth column of the Message Development Worksheet. The text should be written in the language of the target audience and should use vocabulary appropriate for that audience. The text should be concise and should reinforce the information in the corresponding illustration.

Occasionally FGD data reveal messages which are very difficult to portray pictorially. In this case, the text may expand slightly on the illustration. For example, in the message, "The pill is more effective than the diaphragm, condom, foam, and jelly, but not as effective as sterilization," each method can be illustrated in a straightforward manner, but it is very difficult to illustrate the concept of one method being more effective than another.

VI. GUIDELINES FOR MATERIALS PRODUCTION

If appropriate, design materials that are suitable for each geographic region of the country. Materials produced for national distribution may not be equally appropriate in all parts of the country.

A. Tips to Follow[4,5,10,11,17]

The following tips may be useful in developing print materials for low-literate groups.

1. Design/Layout

- **Present one message per illustration.** Each illustration should communicate a single, distinct message. (See figure 14.)

- **Limit the number of concepts/pages per material.** If there are too many messages, readers may become restless or bored or may find the information hard to remember. Try testing different formats with members of your target audience to determine what is most appropriate for them.

- **Make the material interactive whenever possible.** Include question-and-answer sections that allow readers to "use" the information in the material. If the material is to be given to the reader to keep, leave a space for the reader's name, and include review or question-and-answer sections that encourage those readers who can write to actually write in the material.

- **Leave plenty of white space.** This makes the material easier to read, follow, and understand.

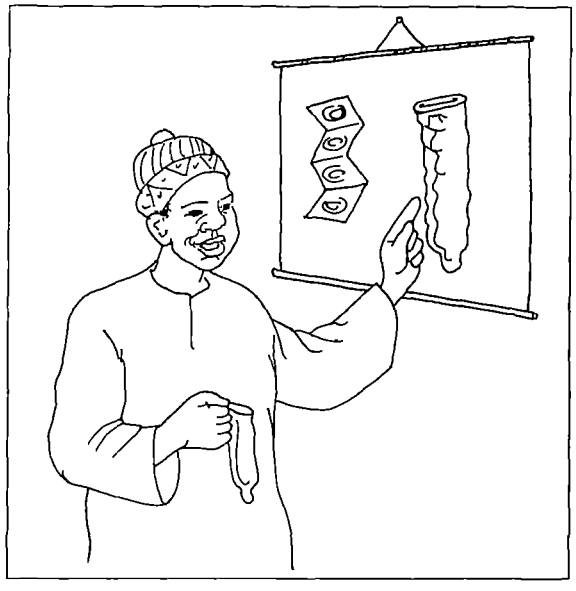


figure 14: **Present one message per illustration.** A health worker presents condoms to clients. *(Courtesy of the Gambia Family Planning Association)*

- **Arrange messages in the sequence that is most logical to the audience.** People who learn to read from right to left, top to bottom, as well as those who are not used to reading at all, will have different ways of viewing pages. (See figure 15.)

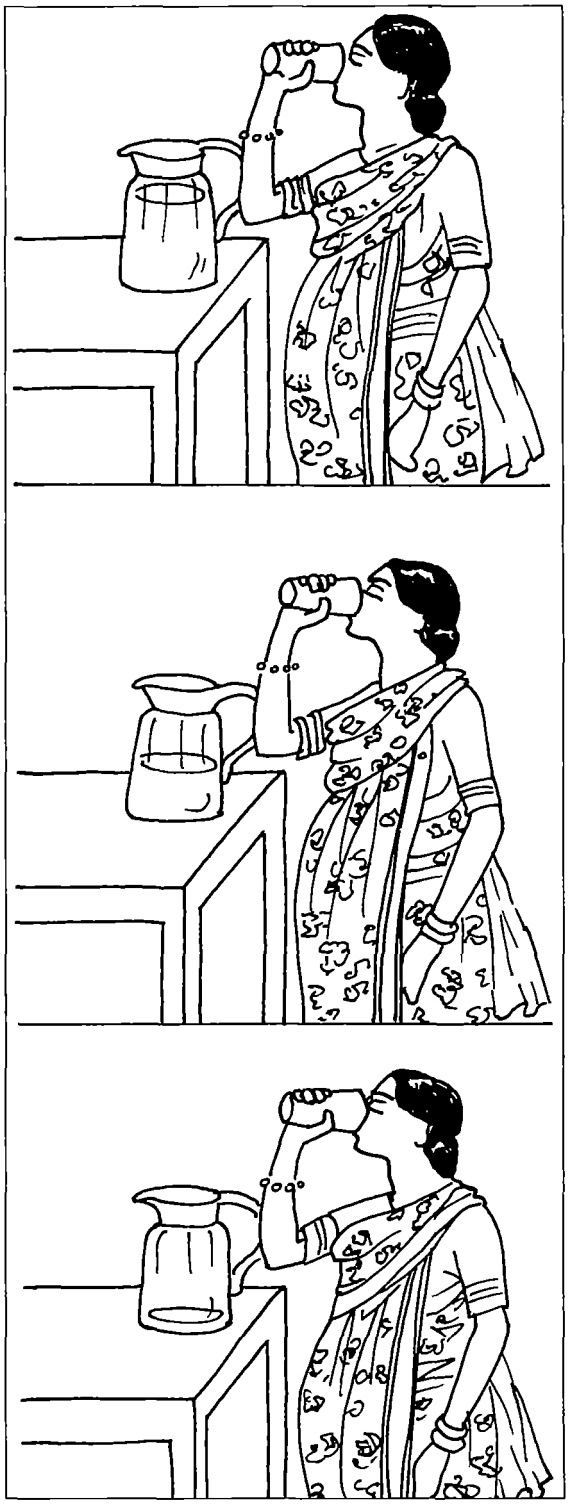


figure 15: **Arrange messages in the sequence that is most logical to the audience.** Women who reviewed this sequence about the importance of drinking several glasses of water each day during pregnancy understood the message better when vertical rather than horizontal drawings were used. *(Courtesy of PIACT/ Bangladesh)*

- **Use illustrations to supplement text.** Placing illustrations throughout the text makes the material more appealing and can help the reader to absorb the information presented.

2. Illustrations

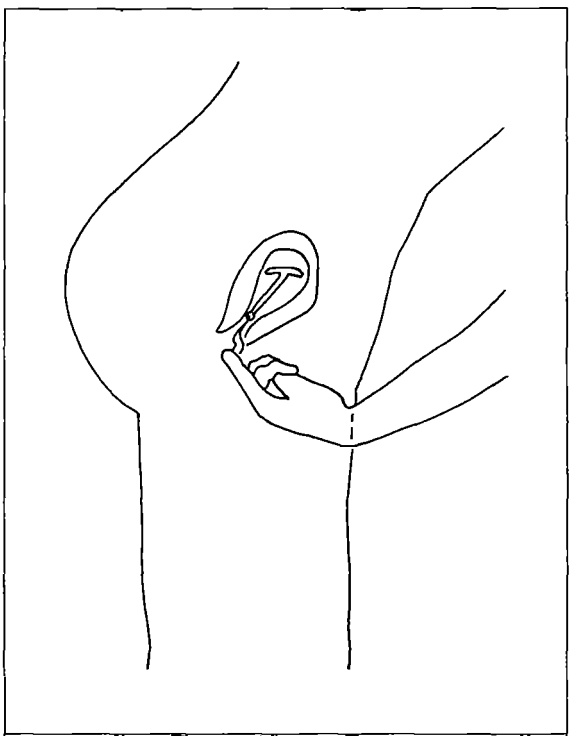
- **Use appropriate colors.** Use colors that have been pretested with the intended audience. Colors have different connotations in different cultures. For instance, in some Asian countries such as India, red is a symbol of happiness, while in parts of Africa, it is a symbol of death.

- **Use familiar images.** People understand and are attracted to pictures which seem familiar to them. Expressions, activities, clothing, buildings, and other objects in illustrations should reflect the cultural context of the audience. (See figure 16.)

figure 16: **Use familiar images.** These drawings illustrate that a pregnant woman should wear a loosely fitting sari (and that tying the sari tightly, as FGDs indicated was the cultural practice for pregnant women, is only appropriate for women who are not pregnant). *(Courtesy of PIACT/Bangladesh)*

- **Use realistic illustrations.** People and objects portrayed as they occur in day-to-day life are easier to recognize than anatomical drawings, enlargements, parts of things or people, schematic diagrams, maps, or other drawings that do not resemble things that people normally see. (See figure 17.)

figure 17: **Use realistic illustrations.** Illustration A shows a "cut-away" drawing of a woman checking the string of her IUD. The backward angle and incompleteness of the figure could be confusing to audiences. Illustration B may portray this message more clearly by showing the woman's full body and correct position for performing the action. The woman is shown wearing clothes appropriate in the local culture. The container is typical of the type used when washing oneself. *(Courtesy of drafts of illustrations from the Ministry of Health, Egypt)*



A

B

- **Use simple illustrations.** Avoid extraneous detail that can distract the reader from the central message. For instance, it is easier to see a family planning clinic set against a plain background than against a crowded city street. (See figure 18.)

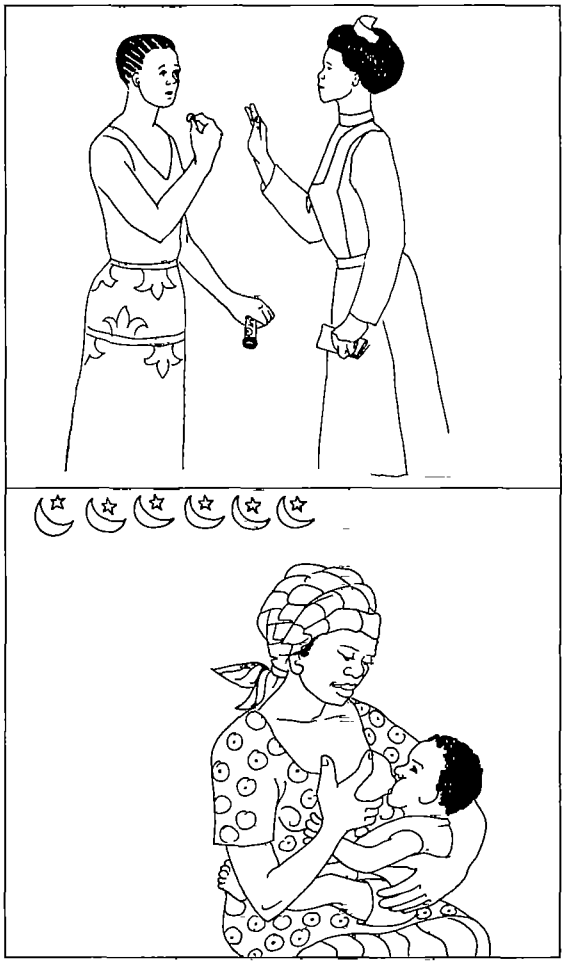
- **Illustrate objects in scale and in context whenever possible.** Although large pictures and text are easier to see, excessive enlargement of detail may diminish one's understanding of the message. (See figure 19.)

figure 18: **Use simple illustrations.** A woman from Sierra Leone walks to a health clinic carrying her baby. *(Courtesy of the Ministry of Health and Home Economics Association of Sierra Leone)*

figure 19: **Illustrate objects in scale and in context.** The size of the NORPLANT[R] contraceptive implants is shown in relation to a hand while the nurse points to the area in the arm where they will be inserted. *(Courtesy of the Population Council and PATH)*

- **Use appropriate symbols.** All symbols should be carefully pretested with the target audience (see Section VII). Crosses, arrows, check marks, inserts, and balloons that represent conversations and thoughts usually are not understood by people who have not been taught what they mean. Likewise, symbols to represent time are culture specific: in some countries, calendar pages or moons and stars may be used to represent months. (See figure 20.)

figure 20: **Use appropriate symbols.** Illustration A shows a nurse telling a client not to eat contraceptive foaming tablets (that must be inserted into the vagina). The use of this familiar gesture for "no"or "don't" was understood, whereas the abstract symbol of an "X" over an earlier version of the woman about to eat the tablet was either misinterpreted or entirely overlooked. Illustration B uses a moon and stars to illustrate that a woman should breast-feed her child for six months. (Illustration A *courtesy of Family Planning Association of Kenya;* illustration B *courtesy of the Ministry of Health and Home Economics Association of Sierra Leone)*



A

B

- **Use appropriate illustrative styles.** Test different illustrative styles with the target audience. Photos without background detail are more clearly understood by some audiences than are drawings. When drawings are more appropriate, shaded line drawings rather than simple line drawings are preferred by some audiences. Similarly, cartoon figures may or may not be well understood, depending on the audience's familiarity with cartoon characterizations. (See figure 21 on page 33.)

figure 21: **Use appropriate illustrative styles.** Here, the same message is shown using different illustrative styles: photograph (A), simple line drawing (B), and cartoon-style drawing (C). (*Courtesy of APROFE, Ecuador*)

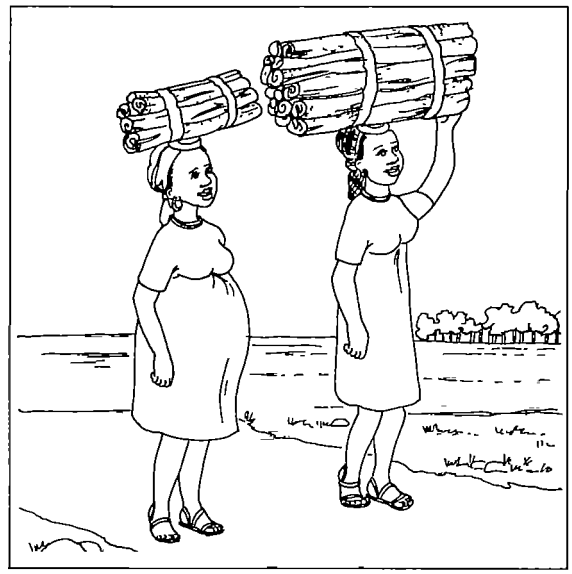
A

B

C

- **Use a positive approach.** Negative messages may be alienating or discouraging rather than motivating. (See figure 22.)

figure 22: **Use a positive approach.** This illustration uses a positive message to depict that pregnant women should carry less weight than nonpregnant women. Illustrating a pregnant woman with a heavy load and an *X* going through the picture is a common, "negative" technique that is often misunderstood by people with low literacy skills. They cannot understand the *X* symbol. *(Courtesy of Maendeleo ya Wanawake, Kenya)*



3. Text

- **Use simple language.** Use short words whenever possible, and keep sentences short. Use the active rather than the passive voice. If there is a significant amount of text, draft materials may be tested with standard readability tests such as Smog or Fry. However, PATH has found that proper pretesting with the target audience usually will indicate whether the reading level of a material is appropriate for that audience. (See Section VII, Pretesting and Revision.)

- **Review repeatedly.** Restate important information, and include review sections whenever possible. This will help the reader to understand and remember the messages presented.

- **Choose a type style and size that are easy to read.** Choose a type style that is clear and easy to read, especially for audiences with low literacy skills. Choose a type size that is large enough for the audience to read.

- **Use upper-case and lower-case letters and regular type.** Text printed in all capital letters is more difficult to read, as is text set in italics. For emphasis, use underlining.

VII. PRETESTING AND REVISION[7,8,17,18]

Once messages are drafted and a series of visuals are prepared, interviews are conducted with representatives of the intended audience in order to test the messages and visuals; this is called "pretesting" or "field-testing." During pretesting, an interviewer shows the materials to members of the target audience and asks open-ended questions to learn if the message is well understood and acceptable.

Pretesting should be done before the materials are finalized so that they can be revised based on the audience's reactions and suggestions. Most materials must be pretested and revised several times. Each new or revised version is tested again until the material is well understood by--and acceptable to--the target audience.

Pretesting is crucial because illustrations and text can easily be misinterpreted, especially by audiences who have had little exposure to printed materials. Pretesting helps project staff know whether the draft materials are understandable to the target audience.

For example, when shown the first illustration in figure 23 (see pages 36-37), many respondents in the Sudan asked, "Why is the mother preparing that mixture in the office?" Women thought that the large table, unlike smaller ones commonly used in Sudanese homes, must be a desk. Since the illustration was meant to promote the use of oral rehydration salts (ORS) in the home, this particular version had to be redesigned to better meet the objectives of the project. Three drafts, each with substantial revisions, were tested before a final, satisfactory version of the illustration was developed.

A. Individual Pretests

Whenever possible, pretests of materials for groups with low literacy skills should be conducted with only one target audience member at a time to ensure that respondent answers are not influenced by other people. As with FGD participants, pretest respondents must be representative of the target audience. The same respondents should not participate in more than one round of pretesting and should not be the same individuals who participated in the earlier focus group discussions. This is to ensure that respondents have no prior knowledge of the intended messages being tested.

Pretest sites and times must be selected with the target audience in mind. Often it is more convenient to pretest materials where participants work, reside, or pass time--such as market places, clinic waiting rooms, or tea stalls--rather than at the pretester's office.

Like FGDs, pretests require a two-person team: an interviewer and a notetaker. Usually, a team can conduct individual pretests with five to ten respondents a day, depending on the length of the material being pretested.

Illustration A: The target audience thought that the mother was in an office because of the large table and because she was wearing her "tobe" (a long piece of cloth that women usually wear over their dress when they go outside the home). The sun and the ORS packet were either unnoticed or unidentified. Since there is no sick child in the picture, it was not clear that the mother is preparing something for a child.

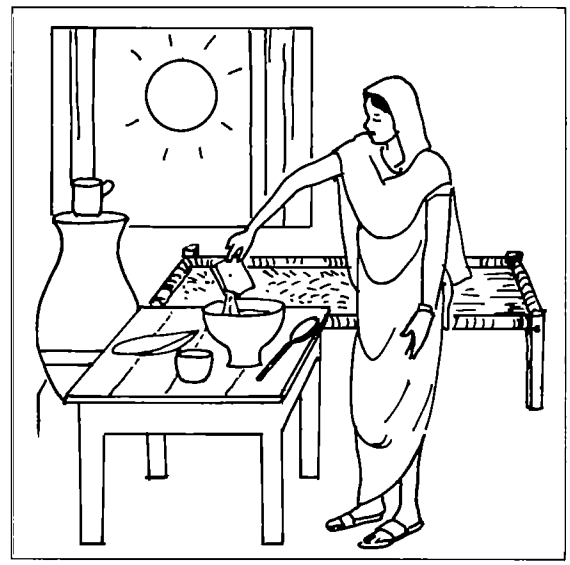


Illustration B: A father, child, and smaller table were added. The mother is still wearing a tobe because, during pretesting, women without tobes were mistaken for men. Also during pretesting, viewers thought that the child was healthy, not sick, because s/he seemed to be active. Respondents noted that the drawing did not include the time during which the ORS is to be prepared.

figure 23: **Drafts of an ORS message.** The four drafts shown on these two pages are designed to convey the message that "parents should prepare one packet of oral rehydration solution and feed it to the child who has diarrhea." When the final version of the drawing was pretested (see Illustration D on page 37), most pretest respondents recognized the picture's components and were able to synthesize the message. The inclusion of carefully selected time elements made the subsequent message (to throw out unused solution after 24 hours) much easier to understand. *(Courtesy of the Sudan Community Based Family Health Project)*

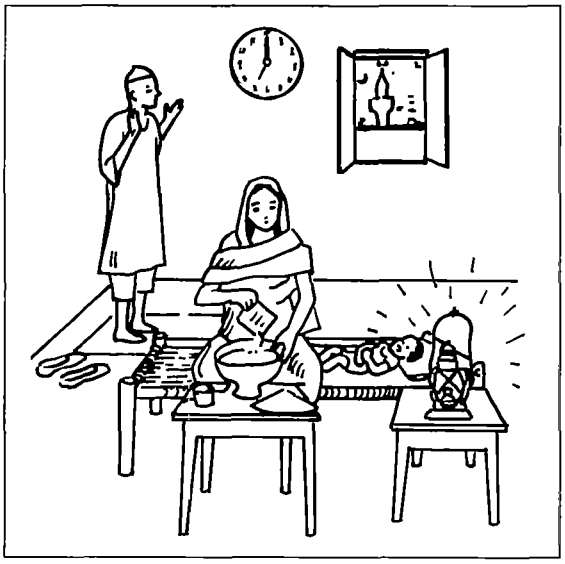


Illustration C: After further revisions (a mosque, clock, and lamp added; father prays, child appears ill), viewers said that the clock was not a familiar symbol and was not understood. The mosque, though identified, did not improve comprehension.

Illustration D: The mosque in the window was replaced by a lamp, to indicate night, and a wall calendar was added. Viewers recognized the calendar and understood a time element in the drawing, although many could not actually tell what date or day the calendar indicated.

The text and picture of each message should be tested separately in order to obtain specific pretesting results for each. One method is to print the text beneath the picture so that the text can be folded out of sight or covered while testing the picture alone. The page may then be unfolded so that the picture and text can be pretested together. (See figure 24 on page 39.) Give each individual message a number to refer to when pretesting: "1A" and "1B" could be alternative versions of the same message.

Once the pretester has selected a pretesting site and identified a respondent, the pretester should introduce himself or herself, and the notetaker, and explain that the purpose of pretesting is to solicit comments from respondents in order to improve the material. The pretester should emphasize that he or she is testing the material, not the respondent.

When pretesting, it is best to interview only one person at a time. Discourage onlookers since they may be distracting to the respondent. During pretesting, the interviewer must:

- Ask questions that are "open-ended" rather than "close-ended" and "probing" rather than "leading." (See figure 25 on page 39.)

- Be supportive of the respondent's answers: use phrases such as "very good" and "you are doing a fine job" even when the respondent misinterprets the message the picture is meant to convey. If the respondent gets the idea that s/he is doing something wrong, s/he will stop talking and the pretest will be invalid.

- Allow the respondent to talk freely without interruption, disagreement, or ridicule.

During early rounds of pretesting, improvements needed in the drawings should become evident quickly. Therefore, it is usually not necessary to interview more than ten respondents before analyzing the results. In subsequent pretests, at least 20 respondents per round should be interviewed before revisions are made. During the final pretest, it is preferable to use a mock representation of the material (final size, layout, and type size) as envisioned by project staff. Following this final round of pretesting, minor changes may be necessary, but comprehension and acceptability should be high enough to proceed with printing.

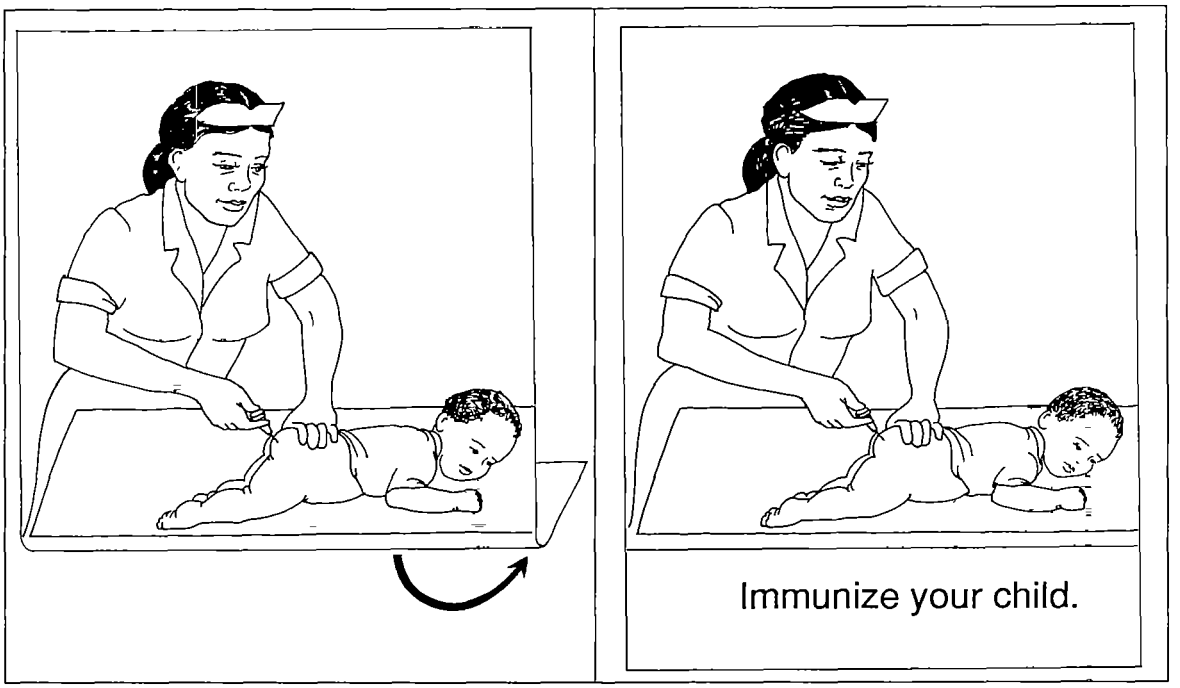


figure 24: Pretesting illustrations and text *(Courtesy of Peru-Mujer, Peru)*

1. CLOSE-ENDED QUESTIONS **Close-ended questions require a brief and exact reply.** Example: "How many men do you see in this picture?" (This assumes that the respondent has already mentioned seeing a man in the illustration.)	2. OPEN-ENDED QUESTIONS **Open-ended questions require longer answers and demand more thought than do close-ended questions.** Example: "What is happening in this picture?"
3. PROBING QUESTIONS **Probing questions respond to replies or request further information.** Example: "You said one man looks sad. Tell me, why you think this man looks sad? What is there about him that suggests sadness?"	4. LEADING QUESTIONS **Leading questions lead respondents to answer the question in a particular way.** *Avoid using leading questions,* for example, "Are you bothered by this picture of a health worker showing men how to use a condom?"

figure 25: Question types

B. Pretesting Forms

PATH uses several forms to help organize and gather data during pretesting: the Pretest Background Sheet (Appendix A), the Pretest Data Sheet (Appendix B), and the Pretest Summary of Results Sheet (Appendix C). These forms may be adapted to suit each project. To demonstrate the use of each pretesting form, sample completed forms are shown in figures 26, 27, and 28. Each form documents one round of pretesting; the same procedures are used for all rounds of pretesting until an "acceptable" version of the message is created.

1. Pretest Background Sheet

The sample completed Pretest Background Sheet (see figure 26 on page 41) shows how this form is used to record information about pretest respondents. One Pretest Background Sheet should be prepared for each round of pretesting. Project staff must decide in advance which criteria to use in selecting pretesting respondents and what information is important to record. These criteria need to be listed in the spaces just above the bold line and should be filled in prior to pretesting.

Personal information about which some individuals may feel sensitive should be solicited tactfully. For example, after the interviewer approaches a potential respondent and explains the need to pretest a particular material among people with limited reading skills, the interviewer may then inquire about the potential respondent's educational level. If the person does not qualify, the interviewer should politely thank the person and continue to search for respondents who represent the target audience.

Information about each respondent should be recorded on the Pretest Background Sheet before the interview is over. The same respondent number used on the Pretest Background Sheet should be used on the Pretest Data Sheet for each individual.

Test the text using the language which will be used in the material

Interviewer(s) SM and DD
Pretest . 2

PRETEST BACKGROUND SHEET

Topic: AIDS Education Material: Booklet

Region Compound X Language Local Dialect

Date	Resp #	Schooling			Sex		Age		Profession	Condom use	
		0	1-2	3+	M	F	<25	25+		Yes	No
Aug. 8	1	X			X			X	Cab driver	X	
Aug 8	2		X			X		X	Farmer's wife		X
Aug. 8	3			X		X	X		Student		X
Aug 8	4	X			X		X		Cassette tape salesperson		X
Aug. 8	5		X			X	X		Hotel maid	X	
Aug. 8	6		X			X		X	Typist		X
Aug. 8	7			X	X			X	Accountant		X
Aug 8	8	X			X			X	Guard		X
Aug. 8	9			X	X		X		Truck driver	X	
Aug. 8	10		X			X	X		Produce seller		X
TOTAL	10	# 3 % 30	# 4 % 40	# 3 % 30	# 5 % 50	# 5 % 50	# 5 % 50	# 5 % 50	#	%	# 3 % 30 / # 7 % 70

The respondent number will correspond with the one used on the Pretest Data Sheet

Use these columns for additional information as needed.

figure 26: Sample completed Pretest Background Sheet

2. Pretest Data Sheet

One Pretest Data Sheet should be completed for each message (page) during each round of pretesting. (See figure 27.) Information above the bold line should be filled out by project staff prior to pretesting. The letters "A," "B," "C," etc., in the "Describe Picture" box correspond to major elements of the illustration. This shorthand system allows the interviewer to record responses quickly by simply listing the appropriate letters.

Everything below the bold line on the Pretest Data Sheet is completed during and after pretesting. First each respondent is assigned a number, which is recorded in the left column. Before showing the picture to the respondent, the interviewer folds the text (if any) out of sight and asks questions about the picture. Next the interviewer unfolds the page and asks about the text. In the box labeled "What do the words mean to you?" the "R" should be circled if the respondent read the accompanying text; the "H" should be circled if the respondent heard the text read aloud by the interviewer. The respondent's feeling about the message and suggestions for improvements should be listed in the next two boxes.

PATH uses two criteria to determine whether a message is communicated successfully. One is comprehension: Does the respondent see what s/he is meant to see in the picture, and does the respondent understand the accompanying text? The other is acceptability: How does the respondent feel about the picture and text, and what changes does the respondent suggest to make the message more culturally appropriate?

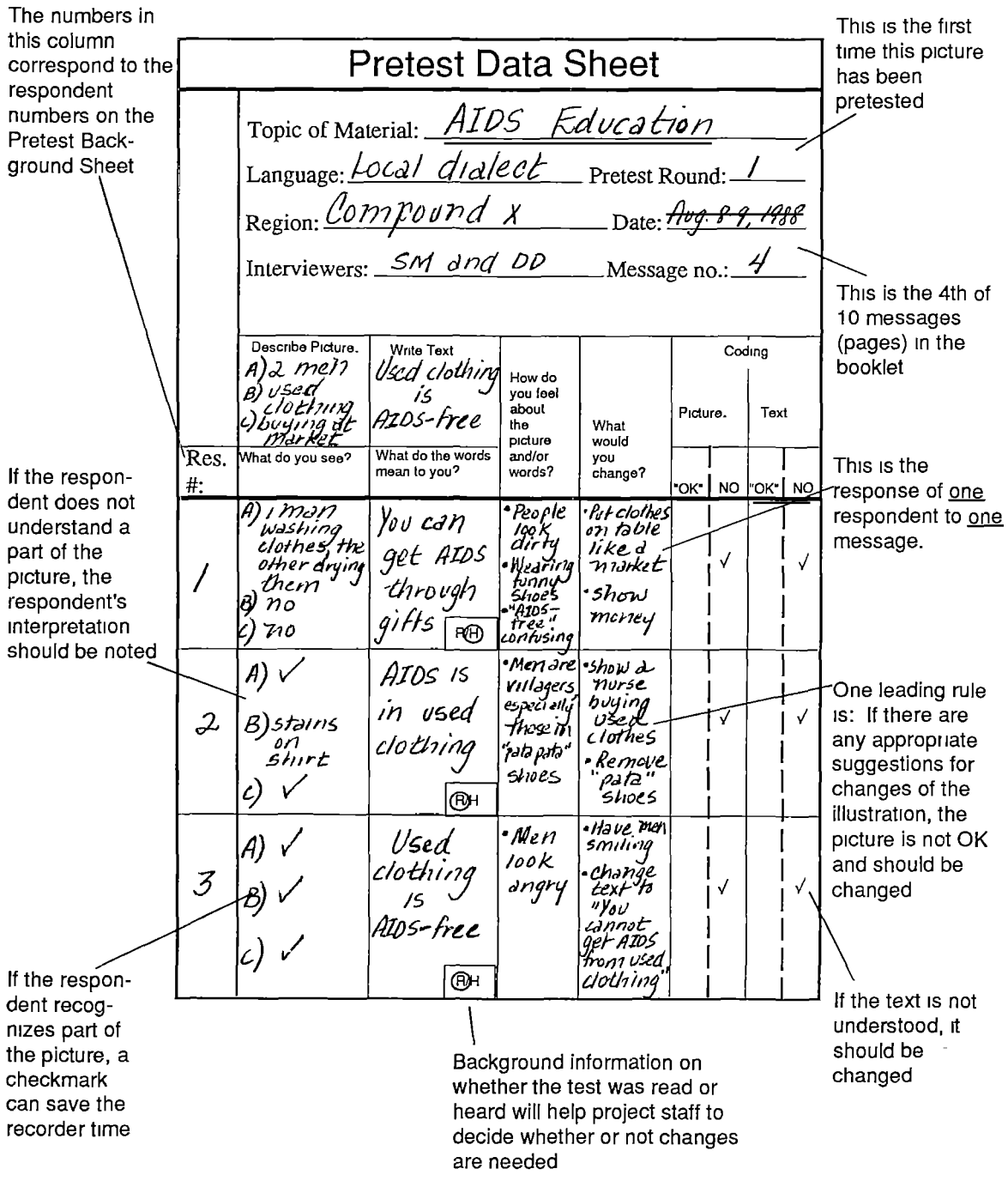
After the pretest team completes a round of pretesting, the coder should carefully read all the responses, determine whether the picture and text are "OK" or "Not OK," and mark the appropriate box. This assessment should be based on:

- Comprehension (from the "What do you see?" and "What do the words mean to you?" boxes); and

- Acceptability (from the "How do you feel about the picture and/or words?" and "What would you change?" boxes).

A response to a picture is considered "OK" if the respondent correctly describes all major elements in the illustration, is comfortable with the picture, and suggests no changes. Similarly, a response to the text is "OK" if the respondent correctly states the meaning of the text and is satisfied with the way the message is stated. Otherwise, a response should be coded as "Not OK."

Both criteria--comprehension and acceptability--must be satisfied for a picture or text to be labeled "OK." If the respondent does not like the picture or suggests practical changes, the picture must be marked "Not OK" even if the respondent correctly identified all elements of the picture. The same condition applies to pretests of the text.



Pretest Data Sheet

Topic of Material: AIDS Education

Language: Local dialect Pretest Round: 1

Region: Compound X Date: ~~Aug. 8-9, 1988~~

Interviewers: SM and DD Message no.: 4

Res. #	Describe Picture. What do you see?	Write Text What do the words mean to you?	How do you feel about the picture and/or words?	What would you change?	Coding: Picture. "OK"	Coding: Picture. NO	Coding: Text "OK"	Coding: Text NO
1	A) 1 man washing clothes, the other drying them B) no C) no	You can get AIDS through gifts (R)(H)	• People look dirty • Wearing funny shoes • "AIDS-free" confusing	• Put clothes on table like a market • Show money		✓		✓
2	A) ✓ B) stains on shirt C) ✓	AIDS is in used clothing (R)(H)	• Men are villagers, especially those in "pata pata" shoes	• Show a nurse buying used clothes • Remove "pata" shoes		✓		✓
3	A) ✓ B) ✓ C) ✓	Used clothing is AIDS-free (R)(H)	• Men look angry	• Have men smiling • Change text to "You cannot get AIDS from used clothing"		✓		✓

figure 27: Sample completed Pretest Data Sheet

Project staff must determine what level of comprehension and acceptability constitutes an "OK" or "Not OK" message. Having coded each picture and text either "OK" or "Not OK" based on the two criteria, the question then becomes, how many "OKs" does it take to have a successful message? This question should be considered and the answer decided in advance by project staff. PATH recommends that at least 70 percent of the respondents should be able to correctly interpret the visuals alone, and that at least 90 percent should be able to interpret the visuals with the text and find them both acceptable.

3. Pretest Summary of Results Sheet

As soon as a round of pretests ends and the coding is completed, the person doing the coding needs to transfer the results to the Pretest Summary of Results Sheet. (See figure 28 on page 45.) Usually only one or two Summary of Results Sheets are needed to record data from all the messages pretested during one round.

Two separate lines should be used to record the results of the pictures ("P") and text ("T") for each message. For example, if there are several pages of a material being pretested, label the first line "1P" and record the comments for the picture of message No. 1 on that line. The second line should be labeled "1T" and contain the results for the text of message No. 1. Subsequent messages should be recorded as "2P," "2T," "3P," "3T," and so forth.

The person coding should calculate the percentages of "OK" and "Not OK" pictures and text based on the total number of pretests. This person should also summarize the suggested changes from the Pretest Data Sheet in the right hand column of the page. Figure 28 on page 45 shows the results of pretesting the picture and text of figure 29 on page 46. Figure 30 on page 46 shows how the suggested changes were incorporated into Pretest Round Two.

Once the individual messages have reached the desired level of understanding, the entire material should be reviewed by the organization(s) collaborating on the project, other institutions interested in using the material, and anyone else with authority to approve the material.

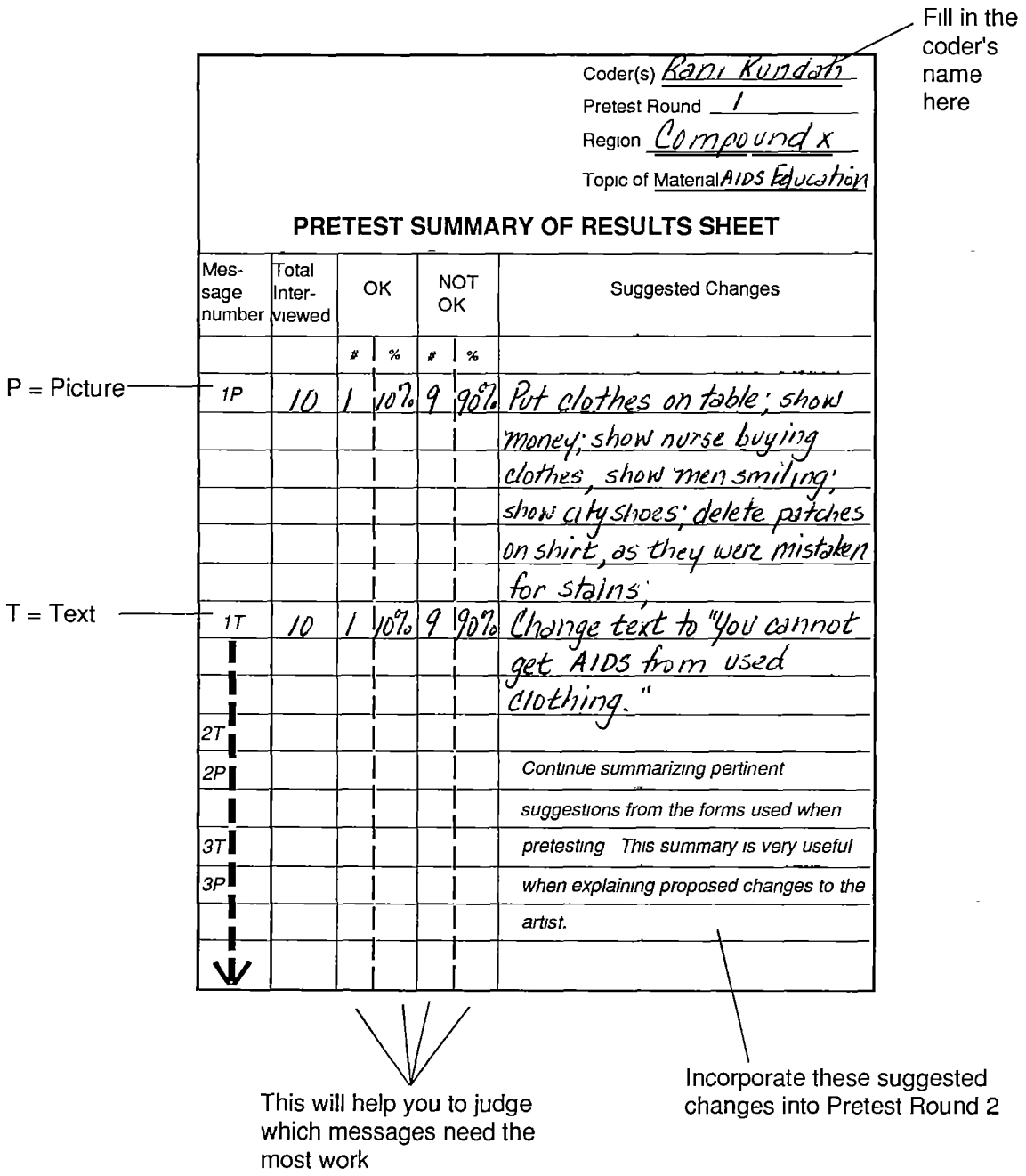


figure 28: Sample completed Pretest Summary of Results Sheet

figure 29: Sample Illustration, Pretest Round One: "Used clothing is AIDS-free" *(From a pretest in a sub-Saharan African country)*

figure 30: Sample Illustration, Pretest Round Two: "You cannot get AIDS from used clothing." The fact that someone as knowledgeable as a nurse was purchasing the clothing helped respondents understand that, contrary to beliefs that surfaced during the FGDs, this was a practice that would not spread AIDS. *(From a pretest in a sub-Saharan African country)*

C. Group Pretests

Group pretests are sometimes used as an alternative to individual interviews. Because literate persons are often more self-assured and not as likely to be influenced by other members of the group when reviewing materials, group pretesting can provide invaluable information when testing materials intended for audiences with more schooling. Group pretesting is also particularly effective for pretesting materials containing primarily textual messages or other materials such as film scripts, audiocassettes, videos, rehearsals, or live performances.

Group pretesting can help project staff to determine if materials which were previously developed by other groups meet project objectives. Criteria for evaluating existing materials include:

- Ease of understanding;
- Appropriateness of reading level;
- Acceptability;
- Quality of illustrations;
- Technical accuracy; and
- Cultural sensitivity.

If new materials are needed, it may be possible to borrow and test ideas from materials developed for other regions and adapt them. Care must be taken to include messages specific to the needs of the new audience (based on local audience research).

As in the case of FGDs, a pretest group should include six to ten people who represent the target audience. The pretester should explain that the group's suggestions will be used to improve the materials. The pretester then asks each group member to take a turn reading a section of the material aloud. The pretest team listens for words that the readers have difficulty reading or understanding. After one respondent reads a section (one page, for example), the pretester asks the whole group to discuss the section and to make suggestions for improving it. The pretester may want to ask some general review questions to make sure that main points and concepts presented in the material are understood. Likewise, pictorial messages may be tested by asking members of the group what they see, having them read the accompanying text, and discussing whether the message and illustration address the same topic.

Some sample questions for pretesting existing textual materials are listed in figure 31.

SAMPLE QUESTIONS FOR GROUP PRETESTS

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

figure 31: Sample questions for group pretests

VIII. PRINTING

Creating print materials requires considerable effort by those who are responsible for developing and testing the material and those who actually print it. It is important to remember that a crucial phase in materials development begins when the item(s) to be printed go to the printer. Mishaps during this phase can jeopardize the results of developmental activities. It is worth spending time working closely with all people involved in printing the materials to ensure that they understand what you want the final product to look like, what you are willing to pay for it, and when you want the job completed.

Printing costs vary tremendously by country, subject, type of material (booklet, poster, flip chart, etc.), and format (size, colors, style). When preparing to print, always consider the following:

- Request cost estimates, references, and samples of work from at least three printers. The printers will need to know:

  - The size of the material.
  - The number of pages of the material.
  - The type of paper to be used for the pages and for the cover.
  - The number of colors to be used in printing the material.
  - Whether or not the material includes any photographs.
  - The number of copies to be printed.

  Consider the quality of each printer's previous work, the printer's responsiveness to deadlines, and the recommendations of other clients.

- In some countries, the more copies you print, the lower the "unit price" (price for each copy). For example, in one country 5,000 copies of a booklet cost $3,750 to print. The unit price was $0.75 each ($3,750/5,000 = $0.75). Ten thousand copies cost only $5,000 to print (unit price = $0.50).

- When printing a booklet, find out from printers whether certain numbers of pages are more cost-effective to print. Sometimes booklets with a total number of pages that is a multiple of four can avoid wasted paper and higher costs. Pages printed on both sides are usually cheaper.

- Ask for advice about page sizes and choose the most cost-effective size based on the paper sheet regularly used by the printer.

- Type of paper is also important to consider when budgeting for printing. There are a number of different types of paper (e.g., bond, cover, colored, book). Every type of paper is also measured by weight. The heavier the paper is, the thicker it is. Bond is

the cheapest paper in the United States for small print jobs (e.g., fliers and leaflets). Twenty-pound bond paper is usually the best bond weight for the price. For books, 60 pound "book" paper is economical. Colored paper is more expensive. For the cover of a booklet or pamphlet, consider using heavy book paper (70 pound) instead of cover paper; it is usually less expensive and saves on bindery costs.

- In pamphlets, paper folds should always be along the "grain" of the sheet to assure ease of opening and to help the pamphlet lie flat when opened. In the printer's "price book" for paper, one of the dimensions of the size of the paper is underlined. This indicates the grain direction of the sheet and affects how the sheet folds.

- Carefully consider how many colors you can afford to use. Multiple colors will increase printing costs. Always count black as one color.

- If the materials will be copied or photocopied by other organizations, choose a format which is easy to copy (e.g., leaflets rather than stapled booklets).

- It is most cost effective to make drawings the same size as they will appear in the pamphlet; otherwise the printer must make reductions requiring either separate camera shots or photostats ("stats"). Stats are cheaper than separate camera shots. They are made by a commercial graphic art camera person.

- Be careful when printing a photo across a fold. More work is required to make sure the two sides match, which adds expense.

- If you want a colored illustration to extend to the sides of the page or into the fold of a pamphlet, expect additional cost. White type against colored or half-toned background also costs more.

- You may wish to print small quantities of the material initially, so that changes can be made if necessary. However, in some countries, this decision must be weighed against the lower unit cost of printing a larger quantity, as mentioned earlier.

- Project managers should retrieve negatives from the printer as soon as print jobs are completed. Store them in a cool, dark, and safe place in case the materials need to be reprinted at a later date.

- Camera-ready artwork should be accessible to staff artists so that necessary changes can easily be made, before the materials are reprinted.

- If possible, use black letters on white paper (as opposed to white letters on dark paper) for text, as this is easier to read.

IX. DISTRIBUTION AND TRAINING

Once materials are developed, tested, and printed, it is important to train the health workers or other community development staff how best to use these new teaching aids. Figure 32 lists some tips for using print materials effectively.

HOW TO USE PRINT MATERIALS

POSTERS

- Display the posters in places of high visibility, such as churches, banks, kiosks, and gas stations. Put them in places protected from rain and wind. (Ask permission first so that your poster is not torn down and thrown out.)
- Use posters to stimulate group discussion.

FLIP CHARTS

- Always stand facing the audience when using a flip chart.
- Hold the flip chart so that everyone in the group can see it, or move around the room with the flip chart if the whole group cannot see it at one time. Point to the picture when explaining it.
- Involve the group. Ask them questions about the illustrations.
- Use text (if any) as a guide; do not depend on it. Memorize the main points and explain them in your own words as you show the picture.

BOOKLETS AND BROCHURES

- Explain each page of the material to the client. This allows the client to both observe the pictures and listen to the messages.
- Point to the picture, not to the text. This will help the client to remember what the illustrations represent.
- Observe clients to see if they look puzzled or worried. If they do, encourage them to ask questions and discuss any concerns. Discussion helps establish a good relationship and builds trust between you and your clients. Clients who have confidence in their health workers will often transfer that confidence to the method or health practice selected.
- Give materials to your clients and suggest that they share the materials with others, even if they decide not to use the method or health practice described.

figure 32: Tips for using print materials effectively

The training process need not be elaborate or lengthy, but staff at all programmatic levels need to know why and how the materials have been prepared and why using them will make their job easier, more pleasant, more efficient, and more effective. As with almost anything new, unless people understand the advantages of the materials, the materials will not be used properly, or perhaps will not be used at all.

Set up systems for distribution and use of the materials so that they are used effectively. (See Appendix D, *Monthly Record Form for Distribution of Educational Materials by Health Educators.*) A common problem with attractive materials is that they may be used to decorate offices of colleagues instead of being given to members of the target audience for whom they were developed. Sometimes materials are deemed to be so important that they are carefully locked in a closet and never used.

Emphasize that the objective of materials development is distribution and correct use with the intended audience. Set up a supervisory system that monitors extent and correctness of use. Suggestions for monitoring use of materials can be found in Section X, Evaluation.

X. EVALUATION

Evaluation of materials is important because:

- It shows how the materials are actually being used by community workers and clients.
- It shows whether the materials were effectively distributed.
- It provides more information about whether or not the materials are accepted and clearly understood by the target audience.
- It may prove to managers that the money allocated to information, education, and communication (IEC) was spent carefully and is a good investment.
- It allows the materials developers to adapt to the changing needs of target audiences.

To evaluate the effectiveness of the materials, one or more of the following methods may be selected:

- **Interview** clients who were introduced to the material by a fieldworker. Did they understand the material? Do they still have it? When do they use it? Have they shown it or given it to friends? How did the material affect their decision whether to use the product or practice the behavior? Can they recall the information contained in the material given to them?
- **Hold group discussions** to obtain feedback on materials from clients as well as service providers. (See figure 31 for examples of questions to be used when pretesting materials with text.)
- **Observe** health workers and program administrators to evaluate how materials are being used and whether the materials are helping them to educate their clients.
- **Attend a clinic posing as a client** to find out how materials are really being used.
- **Conduct intercept interviews** with clients or potential clients outside the clinic setting to see what messages they heard and whether or not they saw the support material.
- **Give** the reader something in the material which requires him/her to take an action that can be measured, such as providing a coupon to purchase a contraceptive product offered by the project.

- **Observe** clients practicing a new behavior that is promoted in the materials, such as mixing oral rehydration solution or preparing infant weaning food.

When using these techniques, suggestions for improving the choice and representation of the messages may be solicited. When this stage of evaluation is completed, project staff will better understand how well the materials are understood, accepted, used, and distributed and whether the effectiveness of the materials justifies their cost.

XI. CONCLUSION

This manual has described the techniques used by PATH and PATH's colleagues in over 40 countries to communicate information to illiterate and low-literate audiences. The essence of the materials development process described in this *Guide* is a continuing interaction with representatives of the groups for whom the materials are developed. Members of target audiences are "experts" about messages which need to be conveyed as well as how best to communicate these messages.

This methodology may be applied to develop materials for target audiences other than low-literate groups and may extend beyond the scope of health and family planning to other issues, such as water and sanitation, agriculture, nutrition, and food preservation. Regardless of the issue or audience, each step in the materials development process helps to ensure that graphically communicated messages will be understood and well received by intended audiences.

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RESOURCES

The following US-based organizations may have additional information on materials for audiences with low literacy skills.

Clearinghouse on Development Communication
Institute for International Research
1815 North Fort Myer Drive, 6th Floor
Arlington, VA 22209
(703) 527-5546

Clearinghouse on Infant Feeding and Maternal Nutrition
1015 15th Street, N.W.
Washington, D.C. 20005

The Johns Hopkins University
Center for Communication Programs
Population Communication Services
527 St. Paul Place
Baltimore, MD 21202
(301) 659-6300

Clearinghouse on Adolescent Fertility (ICAF)
Center for Population Options - Suite 1200
1012 14th Street, N.W.
Washington, D.C. 20005
(202) 347-5700

U.S. Department of Health and Human Services
330 Independence Avenue, S.W.
Washington, D.C. 20201
(202) 475-0257

National Maternal and Child Health Clearinghouse
38th and R Streets, N.W.
Washington, D.C. 20057
(202) 625-8410

National Clearinghouse for Alcohol and Drug Information
P.O. Box 2345
Rockville, MD 20852
(301) 468-2600

Association for Children and Adults With Learning Disabilities
4156 Library Road
Pittsburgh, PA 15234

Family Life Information Exchange
P.O. Box 30146
Bethesda, MD 20814
(301) 907-8198

APPENDIX A

Interviewer(s): _____

Pretest Round: _____

PRETEST BACKGROUND SHEET

Topic: _____ Material: _____

Region: _____ Language: _____

Date	Resp #	Schooling			Sex		Age					
TOTAL		# %	# %	# %	# %	# %	# %	# %	# %	# %	# %	# %

APPENDIX B

PRETEST DATA SHEET

Topic of Material: _____

Language: _____ Pretest Round: _____

Region: _____ Date: _____

Interviewers: _____ Message no.. _____

Res. no	Describe Picture: What do you see?	Write Text: What do the words mean to you?	How do you feel about the picture and/or words?	What would you change?	Coding Picture: "OK"	Coding Picture: NO	Coding Text: "OK"	Coding Text: NO
1		R / H						
2		R / H						
3		R / H						
4		R / H						

APPENDIX C

Coder(s) ______________________

Pretest Round ______________________

Region ______________________

Topic of Material ______________________

PRETEST SUMMARY OF RESULTS SHEET

Message Number	Total Inter-viewed	OK		Not OK		Suggested changes
		No.	%	No.	%	

APPENDIX D

MONTHLY RECORD FORM FOR DISTRIBUTION OF EDUCATIONAL MATERIALS BY HEALTH EDUCATORS

Name of Health Educator_____ Region_____ Month _____ Year _____

# of Materials received	Date Received
Booklets _____	_____
Flipcharts _____	_____
Flyers _____	_____
Other _____	_____

Date	Name of facility	Youth in school	Boy scouts	Girl scouts	Clinic	Other	# of Materials Distributed			
							Booklet	Flip chart	Flyers	Other

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