Immunization and Child Health Materials Development Guide

April 2001

Bill and Melinda Gates Children's Vaccine Program at PATH

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Acknowledgements

This *Guide* is based on a popular and widely used book produced by PATH in 1989 and revised in 1996: *Developing Health and Family Planning Materials for Low-Literate Audiences: A Guide*. We have expanded that *Guide* to include information on developing radio, video, and computer-based materials and shifted the focus to immunization and child health. We have also expanded the scope beyond low-literate audiences to include writing for policy-makers, providers, fieldworkers, and others targeted for training or advocacy efforts. We hope you will find the expanded topics and resources in this guide useful and relevant.

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A Letter from the Director of Advocacy, Communications, and Training

Involving Your Audience in Materials Development—Why Bother?

Sometimes, the health materials development process happens sitting around a table in the office. Someone writes a draft, then calls in technical advisors to check the facts and proofreaders to check the punctuation. Unfortunately, the development team neglects to consult the most important experts of all—the decision-makers, health care providers, or parents who are supposed to understand, appreciate, and use the material itself.

The result? Sometimes it can be disastrous! Consider these true stories:

- An American beer company translated its slogan "Turn It Loose" into Spanish, but staff didn't test the translation carefully enough. Many potential customers in Mexico understood the Spanish slogan to mean "Suffer From Diarrhea." Needless to say, beer sales did not improve!

- When a well-known soft drink company first translated its name into Chinese, staff tried to find words that sound like the English words. They settled on "Kekoukela," but soon learned that it means either "bite the wax tadpole" or "female horse stuffed with wax," depending on the Chinese dialect! Finally, the company decided to do audience research, using many of the same methods described in this book. After investigating 40,000 Chinese characters, a phonetic equivalent was found—"kokou kole," meaning "happiness in the mouth." What a great solution!

These examples focus on problems resulting from poor translation—a relatively simple error to avoid. Other problems can be harder to predict. **But there are low-cost, relatively easy-to-use methods that can help make your materials more effective and attractive. The purpose of this book is to help you master those techniques.**

Along with creating better materials, there are other reasons to invest in the process:

- Audience research provides a window into the minds of the people you are trying to influence. You will have a better understanding of their world—their information needs, their concerns, and their motivation for changing behaviors. This knowledge makes you a stronger materials developer.
- As you move through the pretest and revision process, you'll see the material improve before your eyes. You'll feel confident in your product and proud of it! And you'll be able to justify your materials development decisions with actual field data, instead of assumptions or general impressions.

Materials development is especially challenging when the typical intended audience member has a different level of education, or comes from a different background than the people developing the materials. Consider these statistics:

- Worldwide, an estimated 27 percent of adults cannot read or write.[1]
- In the least-developed countries, the situation is worse—over 50 percent of adults have low or no literacy skills.
- An even higher percentage of people have not taken a high school health or biology course, and, therefore, might not understand basic health concepts.

What does this mean to someone developing health materials? First, it suggests that when trying to reach the general public, we cannot assume that they can read brochures, newspapers, or posters. And even if our intended audience can read, we had better make certain that the text is easy for them to understand and does not use sophisticated technical language or concepts.

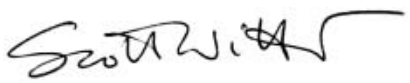
Try these methods, then use your best judgment.

Every materials development situation is different. Sometimes you have enough time and money to do the job; sometimes time and money are in short supply. Sometimes you have a team to work with; sometimes you don't. There is no single strategy that works in every situation. Whatever the challenge, the best person to decide how to solve it is *you*.

Our advice: become familiar with the techniques presented here, try them out, then use the ones that work well for you. Use what you know to create a materials development plan relevant to your needs and resources. Do not be afraid to try something new—just be sure to test it first. And if it works well, share it!

Here at PATH, we have been developing health education materials for over 20 years. We know that investing in careful materials development pays off—and it can be extremely interesting and satisfying. In the long run, we think you'll discover that the extra time and effort you spend making sure that you understand your audience, and that they understand your materials, will help save time, money, and even lives.

Good luck!



Scott Wittet
Director of Advocacy, Communications, and Training
Bill and Melinda Gates Children's Vaccine Program at PATH

How to Use This Guide

PATH designed this *Materials Development Guide* as a reference and educational tool for people who create communication materials. If you're new to materials development, we recommend that you read through the *Guide* before actually starting to develop materials, then carefully follow the eight steps described below and covered in detail in the *Guide*. Those with materials development experience can use the *Guide* for new ideas and tools and as a reminder of, and checklist for, each step in the materials development process.

Step 1: Plan Your Project
What do you want to accomplish, and how will you allot your resources?

Step 2: Identify and Study Your Audience
Who do you want to reach, what information do they need, and what are the best ways to reach them?

Step 3: Develop Messages
What are messages, and what makes them effective?

Step 4: Create Draft Materials
How do you use research findings and design techniques to create appropriate materials?

Step 5: Pretest and Revise Draft Materials
How do you get and use feedback from primary and secondary audiences to improve the materials?

Step 6: Produce Materials
How do you ensure the final materials look, sound, and feel as good as they should?

Step 7: Distribute Materials and Train in Their Use
How do you ensure the materials are used effectively?

Step 8: Evaluate Materials
How can you find out if the materials are having the desired effect?

The *Guide* explores qualitative research and pretesting in depth—areas where our colleagues have asked for additional help. These in-depth sections offer detailed, step-by-step instructions, techniques, and aides to help readers understand and correctly implement qualitative research and pretesting techniques. Sample completed forms are included throughout the book, while blank forms are offered in the appendices.

The book also includes specific information on each medium: print, radio, video, and computer-based materials. While all materials—no matter what the medium—should be taken through the same eight steps, each medium is different and will require slightly different techniques and processes.

We hope you enjoy this updated *Materials Development Guide* and encourage you to send us your thoughts and suggestions on how we can improve it next time.

For more information on immunization, visit our Web site at www.ChildrensVaccine.org.

Step 1. Plan Your Project

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The first step in materials development is a well-designed plan. It provides a clear and concise summary of your project, project justification, project goals, a workplan, a realistic timeline, and a detailed budget. Planning will help you make good decisions and will help you and your staff stay focused on the project, even when things go wrong. Planning also helps you define, and later measure, success.

PATH recommends you put your plan in writing. This means documenting your research, writing out your communications objectives, and creating a detailed, step-by-step workplan and budget. Although this may seem like a lot of work, it will help ensure your final product is accepted, distributed, and properly used.

A. Find and Review Existing Materials and Resources

A thoughtful and thorough effort in this area will have a powerful effect on the quality of your final product. By building upon and improving existing materials, you can produce a higher-quality product with less time and money.

1. Gather Existing Materials. People have been developing materials on immunization and child health for more than 40 years. A few hours of research can yield many useful resources and materials focused on your topic of interest. Sometimes you may find that the material you need already exists. Evaluate it using a process similar to the pretesting process described in this *Guide*. If it is found to be appropriate, you can reproduce it or help distribute it to a broader audience—without going through the costly and time-consuming process of developing original material. Or, you may find a nearly appropriate material that needs translation, updating, new facts and figures, new drawings, new colors, or a better narrator. It's highly likely that you'll find something—a booklet, brochure, poster, or radio script—that you can draw upon or modify when creating your new material. If so, call or write the organization that created it and get permission to borrow from it. Ask if they conducted an evaluation of the material and if they would share it with you. Whether they have evaluated it or not, be sure to evaluate it with members of your audience(s) before adapting or reproducing it.

Also search for knowledge, attitude, and practice (KAP) studies that relate to your audience or your topic area. These surveys are often available and provide valuable data about audiences you might hope to reach.

2. Look for Materials on Other Topic Areas. You may find that high-quality materials exist, though they focus on other topics, such as maternal health, nutrition, or HIV/AIDS. They can give you ideas on formats, colors, art styles, artists, writers, and producers, for example. Borrow from these sources, learn from their mistakes, and build on their successes.

Keep in mind that you don't need to reinvent the wheel. Ask your partners or colleagues in other organizations if they have information, materials, or experience to share with you. Learn from each other and further enhance your relationship. Partners can provide good information that you might not get elsewhere.

B. Define a Communications Objective[2]

Once you have a better idea of what kinds of materials are and are not available, you can begin to define your communications objective. Write a plan, and share it with your communications team. Before moving to *Step 2: Identify and study your audience*, try to reach agreement on your objectives so you all understand what you hope to accomplish, and how.

1. Identify Your Overarching Goal. Materials development is usually part of a larger program that aims to achieve an overarching goal: for example, to increase routine immunization rates among urban mothers, or to encourage young people ages 9–15 to get hepatitis B shots. Whatever it is, make sure you and your team understand the overall goal of your program.

2. Define the Purpose of Your Proposed Materials. Generally, try to answer what you hope to accomplish through the materials development process. Explain how your proposed material or set of materials will help you achieve your overall programmatic goal. Will these materials educate parents about the importance of immunization? Or will they explain immunization and disease facts to parents?

3. Think About the Audience. Think about whom your communications materials are meant to address. Try to define this group as narrowly as possible. In the next section, you will learn how to define your audience with more certainty and learn about their information needs.

4. Decide Which Medium to Use. Decide which medium—print, radio, video, or computer-based—might be most appropriate for your audience and your budget. Considerations for your audience might include whether or not they are literate, whether they have access to a radio, television, or computer, and whether they will need to refer to the information again. Also, consider your budget and your ability to distribute materials. Would using your materials require training? Try to answer these questions to the best of your ability, and then test your assumptions during the audience research phase. You may learn that while many people own radios, they prefer printed information to remind them of important instructions, or vice versa.

The Creative Brief[3]

A creative brief is one way to help you clarify the scope and intent of your materials development project. It is both a process and a product. The *process* is to think and decide who or what will be your intended audience, and what will be your communication objectives, potential obstacles, key promise and benefit, support statements and rationale, message tone, communication channels, and other creative considerations. The *product* is a document stating all these elements clearly and succinctly.

The creative brief helps ensure that your materials will reflect what you want, in the way you need. It serves as:

- A crucial link between the research and your communication strategy;
- A way to translate background information into actual materials;
- An assurance that your interventions will reflect and address the concerns and needs of your audiences; and
- A "contract" between you and the creative team, helping ensure that all agree on what the communication is meant to accomplish, its key elements, and its strategy.

Whether your team or an outside creative team will create materials, the brief should include the following:

- **Intended Audience.** Who do you want to reach with this communication?
- **Communication Objective(s).** What will this communication make the audience feel, think, believe, or do?
- **Obstacles.** What beliefs, cultural practices, pressures, traditions, family, religion, and misinformation stand between your audience and the communication objectives?
- **Key Promise and Benefit.** What's in it for the audience?
- **Support Statement and Rationale.** Why does the key promise outweigh the obstacles?
- **Tone.** What feeling should this communication have?
- **Media.** What channel(s) will you employ to best reach your audience?
- **Creative Considerations.** What additional points need to be considered when designing this communication? Multiple languages? Multiple regions of the country? Gender considerations?

Working through these questions should give you a fairly clear idea of what your communications approach should be. A word of caution, however: this is a process of learning and revising. Sometimes your assumptions will be incorrect. You may need to revise your brief after conducting audience research.

C. Create a Workplan

A workplan is a detailed list of the steps involved in the materials development process. It helps you to organize for upcoming steps. Figure 1 shows a very general workplan attached to a simple timeline. You can use this sample as a starting point for your own workplan. Notice that the time needed to complete the materials development process, from concept to final product, can range from six to twelve months or more. The time can vary, depending on the complexity and number of materials you are producing, the number of staff devoted to the project, and the amount of work you can contract outside your organization, such as scriptwriting and filming for a video. Then, after using the materials for six months or so, evaluate them to see if they are serving the desired purpose.

D. Develop a Budget

A budget should include all projected expenses associated with a project, from refreshments at focus group discussions (FGDs) to staff salaries. When your project is complete, you can fill in actual budget costs and compare them with your projected figures for future planning. Figure 2 shows a sample budget for print, radio, and video materials. While not an exhaustive list, this sample includes the major expenses you might encounter in a typical materials development project. What you include in your budget will vary, depending on the variety and complexity of your materials, the number of staff devoted to the project, and whether you hire contractors to carry out part of the work (such as scriptwriting and filming for a video). Your project may include different line items and costs reflecting local resources, staffing patterns, and institutional contributions to health and immunization programs.

Note About Radio and Video Programs

Unless you have the expertise, seriously consider contracting out the scriptwriting, recording, and filming of lengthy radio or video programs. Before getting help from contractors, complete the audience research and message development steps. Then, work with your contractor to develop and pretest drafts until a final version is ready for production.

Figure 1. **Sample Materials Development Workplan**

Activity	Month												
	1	2	3	4	5	6	7	8	9	10	11	12	18
1. Plan the project													
a. Research existing materials	X												
b. Develop workplan and select staff	X												
c. Develop budget	X												
2. Conduct audience research													
a. Hold focus groups (for example, 2 groups per audience segment for a total of 8 groups)		X											
b. Analyze focus group data		X	X										
3. Develop messages			X										
4. Draft material													
a. Hire consultants, such as artist and scriptwriter			X										
b. Work with artist on illustrations, or with scriptwriter/creative agency to draft script that incorporates messages			X										
c. Draft text to accompany images, or work with artist or creative agency to create storyboard for video			X										
d. Produce rough-cut audiotapes, animated storyboard, or rough-cut video to be used in pretesting				X									
5. Pretest and revise materials													
a. Technical review—accuracy check				X									
b. Pretest and revise until materials are satisfactory				X	X								
c. Review by interested persons and organizations					X								
6. Produce broadcast-quality program or other final material						X	X	X					
7. Distribute materials													
a. Write and refine distribution plan			X			X							
b. Train health workers to use							X	X					
8. Evaluate materials												X	X

Figure 2. **Sample Materials Development Budget**

Objective: Develop, field-test, revise, print, and evaluate a booklet, radio program, and video for clients as indicated in the sample workplan in Figure 1.

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)
- Benefits

Consultants

- Print Material
  - Artist (20 drawings at $xx/drawing)
  - Graphic designer (15 days at $xx/day)
  - Translator (3,000 words at $xx/word)
  - Field staff (35 days at $xx/day)
- Radio/Video
  - Scriptwriter (xx days at $xx/day)
  - Artist (50 drawings at $xx/drawing)
  - Actors (xx days at $xx/day)
  - Technical content reviewers (xx days at $xx/day)
  - Professional audio recording producer (xx days at $xx/day)
  - Professional videographer and sound person (xx days at $xx/day)
  - Field staff (35-70 days at $xx/day)

Transportation

- For training (2 trips x 10 participants at $xx/trip)
- For FGD research (8 trips at $xx/trip)
- For pretesting (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 pretesting (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 pretesting (20 days at $xx/day)
- For evaluation (5 days at $xx/day)

FGD Refreshments (80 snacks at $xx/snack)

Photocopying

Production

- Printing for booklet (3,000 copies at $xx/copy)
- Production of rough-cut radio and video programs
- Production of broadcast-quality radio and video programs
- Rental of professional recording or studio equipment
- Rental of professional filming studio, if needed

Distribution and Training

- Mailing or delivery of final product
- Training costs relating to the use of product

Evaluation

- Developing questionnaires or interview guides
- Copying and administering the questionnaires and guides
- Collecting, analyzing, and reporting the results

Communication—telephone, Internet access, fax, postage

Administrative and Overhead Costs

TOTAL:

Step 2. Identify and Study Your Audience

Step 2. Identify and Study Your Audience

Many people who develop materials try to create something for "everyone." After all, everyone needs good information and would probably benefit from knowing what you have to say. In reality, no one thing is right for everyone. Instead, certain things tend to work best for certain groups of people. The more narrowly you can define these groups, the closer you will come to meeting their needs. That is why materials should speak to a particular audience: people who share similar characteristics and have similar information needs. If it happens that they also resonate with other audiences, consider it a bonus!

A. How to Define Your Audience

You can define your audience in many ways. Your goal should be to define the most specific audience you can within your budget and timeline. Broad audience categories, such as 'parents,' are sometimes the most challenging to reach, but with a little creativity, you can break this group down into a smaller, more targeted audience, such as 'first-time parents living in rural areas.' This way, you can reach the right people more efficiently. Several methods for narrowing your audience effectively are described below.

1. Define Your Audience by Type of Group. In the realm of health issues, you may commonly divide people into audiences by job category and knowledge base.[4] In dividing by job category, you can vary the complexity and content of your materials, creating something appropriate for each group. Following is an example of the informational needs of various audiences, separated by job category.

- **Policy- and Decision-Makers** need an objective presentation of a vaccine or health product, 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 care providers in the community, need technical information such as immunization schedules and disease burden data. Present this information clearly and without unfamiliar jargon.
- **Clinicians** need detailed information on (1) how to practice safe injection—for example, sterility, proper disposal of used syringes and needles, single use of syringes and needles; (2) how to use a product—for example, new vaccines or new injection devices; and (3) how to educate and counsel clients about immunization. Having this information helps clinicians feel more confident about the product and provide high-quality services.

- **Fieldworkers, traditional birth attendants (TBAs), and vaccinators** need accurate and standardized educational materials to support their interactions with clients. Materials for fieldworkers are usually less technical than those for clinicians, but they should also include information on safe injection and effective client counseling.
- **Clients** need information about vaccines and the diseases they prevent, as well as the importance of following the immunization schedule. Clients also need to know about possible side effects of vaccines so that they can differentiate between symptoms that can be treated at home and symptoms that require medical attention.

Figures 3 through 6 show examples of materials developed to provide information on hepatitis B to different audiences.

Figure 3. **Information for Policy-Makers**

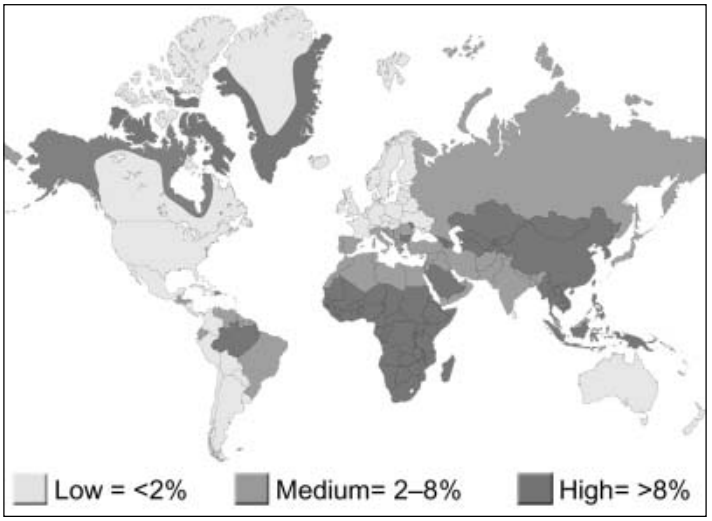


Illustration showing worldwide Hepatitis B prevalence.

Courtesy of the World Health Organization, 1998

Figure 4. **Information for Physicians**

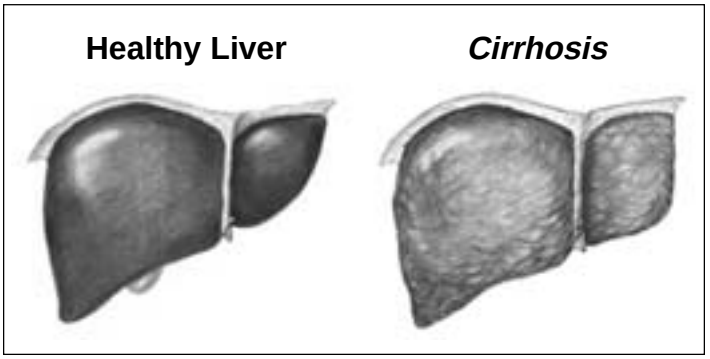


Illustration from a Web site demonstrating the effects of hepatitis on the liver.

Courtesy of the Hepatitis Information Network

F*igure 5.* Information for Fieldworkers

Illustration from a booklet showing proper maintenance of the vaccine cold chain.

Courtesy of the International Task Force on Hepatitis B Immunization and PATH/Thailand

***Figure 6.* Information for Low-Literate Clients**

Illustration from a pictorial booklet showing a health worker administering a polio vaccine.

Courtesy of the International Task Force on Hepatitis B Immunization and PATH/Thailand

2. Define Your Audience by Stages of Behavior Adoption. When addressing larger audiences, such as providers or parents, you may need to further narrow the audience by behavior adoption. While there are many behavior change theories, typical models include the following:

Behavior	*Definition: A person…*	*Example: The client…*
Awareness	Becomes aware that the product or service exists.	Hears about the hepatitis B vaccine during a visit to the clinic or on the radio.
Decision	Makes the decision to try the product or service.	Decides to get her/his child vaccinated with the hepatitis B vaccine.
Instruction	Takes active steps toward learning how to try the product or service.	Calls a clinic, asks when to come, and asks how much it will cost.
Trial	Tries the product or service once.	Brings her/his child to a clinic for an immunization session.
Continuation	Continues using the product or service.	Returns to complete the immunization schedule.

With this progression in mind, project staff should design messages and select media according to audience needs.

If the audience needs to:

- Gain awareness
- Make a decision
- Learn how to do something
- Be encouraged to repeat or continue the behavior

The best medium to use might be a:

- Poster
- Counseling guide
- Video
- Public service announcement

3. Define Your Audience by Demographic Characteristics. Demographic characteristics often help further narrow what still may be a large audience such as *parents who are not yet aware of the hepatitis B vaccine*. This group can be subdivided into smaller groups, for example, *rural women with children under age two, and who are not aware of the hepatitis B vaccine*. Carefully defining the audience segments will help ensure that the intended audience is accurately represented during research and pretesting.

Examples of demographic characteristics include the following:

- Age
- Marital status
- Income
- Social class
- Number or age of children
- Urban/rural dweller
- Gender (sex)
- Occupation
- Religion
- Ethnicity or language group
- Literacy and education level
- Level of expertise or experience

4. Define Your Audience by Relevancy of Issue. Some segments of the population are more affected by a particular health problem. For example, some groups have a higher susceptibility to certain diseases because of their genetic makeup. These groups share the same concerns or have to cope with a similar problem in their homes or communities. Perhaps they belong to a support group in their community or read a certain newsletter for information about their particular health problem. Find out what resources are available to this audience to help them deal with the problem and how serious they perceive it to be. Their responses to these questions can help you determine the best way to reach them and to effectively intervene.

5. Remember Your Secondary Audience.[5] While your primary audience is the specific group of people you want to reach, as discussed above, your secondary audience includes (1) people who can help identify ways to reach your primary audience and (2) allies, such as decision-makers, community leaders, and health authorities, who can help solve the problem.[6] As part of your materials development process, carefully consider your audience, what you want them to do, and how best to get them to do it. Service providers, for example, can have an enormous impact on whether and how often community members bring their children for immunization. Their support is extremely important, so ask them what would be useful for educating and motivating clients.

It's not always possible or desirable to focus all your efforts on one or two segments of the population. Political or equity issues might suggest you pay attention to audiences who are less likely to respond to your intervention. If possible, start by spending more money on the segment that is most at risk from the health problem and will respond most easily and quickly. Plan to provide for the hard-to-reach population later.[7]

One technique for helping to define your primary audience is to write a detailed description of the typical person whom you are trying to reach. For example, "Nyima has six children. Her husband works in the city and comes home once a month. She must take a riverboat, walk four miles, and then find a ride on the highway to reach the nearest clinic. She gets most of her information from merchants passing through her village, and her mother-in-law accompanies her to all hospital and clinic visits…"

B. Determine Informational Needs of Your Audience Through Research[8]

Once you have a general understanding of your key audience(s), you need to talk to them and test your assumptions. Find out what kind of information they lack, what misinformation they have, and how best to reach them.

The following are basic questions you should be able to answer before developing draft materials:

- What does your audience already know about the topic?
- What kinds of rumors or misinformation have they heard on the topic?
- How do they feel about the topic?
- What kinds of questions do they have?
- What is preventing them from taking the next step?
- What has motivated them in the past?

Only after answering these questions can you effectively communicate with your audience.

The Value of Audience Research: The "Vong Tay"

In 1989, PATH was asked to assist the Government of Viet Nam with a national training program to improve quality of care for IUD insertion and counseling. The IUD being promoted was the Copper T 380A. Vietnamese doctors, nurses, and health educators commonly called the device the "Vong Tay." Vong means "ring," and it had become a generic term used for IUDs in Viet Nam, derived from early, circular IUD designs. Tay was simply the way francophones say the letter "T." To our Vietnamese colleagues, Vong Tay translated as "T-shaped IUD."

To create useful training materials, the curriculum development team decided to practice their newly acquired focus group discussion skills so they could learn more about why women choose to use or not use IUDs. Splitting up into teams, we conducted FGDs with various groups over the course of three days. At the end of each day, the interview teams met to discuss what we had learned. Most of the FGDs went well, and we got several new ideas. But the last day, we truly struck gold.

A team was sent to talk with women who had chosen not to use IUDs. They asked the participants why they didn't like to use IUDs. Most of them gave the usual reasons, such as bleeding or concern about infection. But one woman said, "I don't want to lose feeling down there."

The facilitator was confused, and he probed: "What makes you think that you would lose feeling?"

"Well, the name. You know, Vong Tay, the 'numbness IUD!'"

There was silence for a moment in the training room. Gradually, the team understood and looked at each other with expressions that said, "How could we be so stupid?"

Although "tay" was supposed to stand for the letter "T", the same word, pronounced the same way, actually means "numbness" in Vietnamese. This client, who doesn't speak French, assumed the name was referring to a Vietnamese term. It was no surprise that she thought the side effect was too extreme!

The team decided immediately to find a new name for the product.

1. Learn the Difference Between Qualitative and Quantitative Research. Two types of research can help you learn more about your intended audience before you develop messages: qualitative and quantitative. Both can provide excellent information, but they are vastly different in technique, rationale, and results. Figure 7 provides a comparative chart that defines and describes each type in detail.

Figure 7. **Quantitative Versus Qualitative Research[9]**

Quantitative Research Examples of quantitative techniques include written surveys, KAP surveys, and structured interviews.	**Qualitative Research** Examples of qualitative techniques include in-depth interviews, focus group discussions, participant-observation, and exit interviews.
• **Answers questions of how many and how often.** Documents differences that can be measured in numbers.	• **Answers questions of why and how.**
• **Closed-ended questions.** Uses a series of closed-ended questions that offer the respondent several choices when answering a question. For example: "Was your child immunized for tetanus? ___Yes ___No ___ Don't know." Closed-ended questions limit the kinds of responses that can be recorded, which keeps data organized but limits the ability to probe whatever response is given. For instance, you may not be able to ask participants *why* they don't know if their child was immunized for tetanus.	• **Open-ended questions.** Asks open-ended questions that allow respondents to give detailed answers, thus revealing their biases, the extent of their knowledge, and the gaps in their thinking. For example: "Why is immunization necessary?" might reveal a whole range of answers that can help you address the informational needs of your audience. Because responses from participants will vary in content and length, a note-taker usually records responses on a blank sheet of paper and analyzes the data later.
• **Statistical.** Provides a measurement of the audience's responses in numerical estimates. For example, 60 percent of mothers with children under 5 years of age reported that their children had received tetanus shots.	• **Anecdotal.** Provides in-depth understanding about audience responses. For example, because a measles outbreak started the week after a national immunization day, mothers thought the polio vaccine caused the measles.
• **Measurable.** Deals with objective, measurable behavior, knowledge, and attitudes.	• **Contextual.** Deals with the contextual and emotional aspects of human responses.
• **Process often pursues proof of a hypothesis.**	• **Process is generally one of discovery.**
• **Large sample size.** Involves large numbers of participants and interviewers, generally making this kind of research expensive.	• **Small sample size.** Involves small numbers of participants and interviewers, usually making this a less expensive form of research.
• **Straightforward analysis.** Includes questions that are straightforward to ask and yields answers that are straightforward to analyze.	• **Thoughtful analysis.** Yields results that are more difficult to analyze, requiring contemplation, organization, and interpretation. Rich with details, often providing answers to questions no one thought of asking.
• **Firm conclusions.** Draws firm conclusions and results that can be generalized to the population at large. Data are presented as percentages and numbers of people who believe or do certain things. Counts the number of people fitting into different categories.	• **Insights.** Provides insights into attitudes, beliefs, motives, concerns, and behaviors. Can be used to add deeper meaning and real-life examples to quantitative findings. Discloses clues about an audience's behaviors, fears, or doubts.

2. Decide Which Method Best Meets Your Needs. Before you decide whether to use qualitative or quantitative audience research, ask whether you really need to know how many people believe something, or whether it is enough to know what kinds of things people believe, and why they believe them. In the second case, qualitative research techniques may be more appropriate. Focus group discussions are often the audience research method of choice for materials development. Figure 8 offers guidelines for choosing to use, or not to use, qualitative research.

Figure 8. **When Qualitative Research Will and Will Not Meet Your Needs**

Qualitative research will meet your needs if you. . .[10]

- Do not plan to quantify the information you gather.
- Would rather know *how* and *why* than *whether* and *how many*.
- Want to learn what your audience believes about a specific subject.
- Want to test the reactions, ideas, and feelings of your audience.
- Want to hear how the audience would describe a subject in their own words.
- Want the freedom to probe beyond initial responses to a question.
- Are searching for reasons behind an attitude or practice.
- Are working with a group that may be resistant to paper-and-pencil methods.
- Believe the range and intensity of opinions are important.
- Are researching sensitive or difficult topics, or intense situations.

Qualitative research will not meet your needs if you. . .[11]

- Need statistical data, yes or no answers, or rated, scaled answers.
- Have little control over the research situation.
- Cannot establish trust with the intended audience.
- Cannot ensure free expression of the participants.
- Know that confidentiality is critical and cannot otherwise be protected.
- Know that participants have problems with the social aspects of group participation.
- Cannot surmount language barriers.
- Have as your true goals organizational analysis and conflict resolution.

In-Depth: Effective Qualitative Research

In-Depth: Effective Qualitative Research

To be effective, qualitative research should follow general guidelines and be conducted by experienced researchers. Following is an overview of qualitative research methods and some tips and techniques that can improve your results.

A. Two Useful Qualitative Research Techniques

In this section, we examine how to conduct the two kinds of qualitative research: in-depth interviews (IDIs) and focus group discussions. Both techniques will yield rich data, but one or the other can be more appropriate in different situations.

1. In-Depth Interviews and When to Use Them. In-depth interviews are one-on-one interviews where discussion between one interviewer and one participant takes place in a private, confidential setting. Sometimes a note-taker is also present but does not actively participate in the discussion. In-depth interviews help researchers gain a great deal of insight into a person's thoughts, feelings, and behaviors. Whereas quantitative research instruments, such as survey questionnaires, may take only a few minutes to complete, in-depth interviews often take an hour or more because they let the respondent talk at length about topics of interest.[12]

Figure 9 lists circumstances in which in-depth interviews may be particularly appropriate.

***Figure 9.* Best Times for Using In-Depth Interviews[13]**

When. . .	*For example. . .*
The subject matter is complex.	A study among doctors, nurses, and health workers about complications from immunization might be better conducted in individual interviews because responses may be very complex or technical.
The subject matter is highly sensitive.	Interviews with mothers who have lost a child to a vaccine-preventable illness may be best conducted in private to avoid shame or guilt. However, in some cultures and situations, more honest and accurate responses will be given in a group setting. In those situations, FGDs might be more appropriate.
Respondents are geographically dispersed.	A study among regional cold-chain logistics managers would be difficult to organize if all logistics managers had to travel to a specific location at a certain time.
Peer pressure might make group discussion difficult.	A study among health workers in a medical community where opinions are deeply divided is best conducted individually so respondents can speak frankly about their opinions and experiences.

2. Focus Group Discussions and When to Use Them.[14] Focus group research methodology is borrowed from commercial marketing.[15] It consists of in-depth discussions, usually one to two hours in length, in which several (usually six to ten) representatives of the intended audience, under the guidance of a facilitator, discuss various subjects relating to a primary research topic.

Figure 10 lists specific circumstances in which focus group discussions are particularly appropriate.

***Figure 10*. Best Times for Using FGDs**[16]

When. . .	*Why*
Time and resources are limited.	Unless quantitative data are needed, focus groups are a good option because many people are interviewed at once, making them cost-effective. Also, a lively group discussion often triggers other participants' memories and ideas, thereby enriching the data.
Little is known about the audience.	FGDs are particularly useful in the audience research stage of the communication process. Group discussions provide insights into the intended audience's beliefs and perceptions of message concepts, and they help trigger the creative thinking of communication professionals.
A variety of questions must be answered.	FGDs are flexible and can be used to test a variety of research questions. 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 or draft materials; and • Design survey questionnaires.

Throughout the FGD process, you may need to consider creative approaches to meet your research needs. For instance, teenagers may get bored during traditional focus group discussions or feel too shy to participate fully. Elders in some societies are shown respect by not being interrupted, making it challenging to keep the discussion moving. In some cultures, people are not accustomed to expressing their opinions. Under these circumstances, find an approach that will offer insight into the participants' personal attitudes and experiences without threatening their comfort or privacy. Here are some ideas: [17]

- Present a description of a scene or picture, and get group members' reactions.
  Example: A photograph of a child with measles.

- Ask participants to imagine something and then describe it to you.
  Example: The ideal child health clinic.
- Set up role playing among the participants, and listen to discover not only their knowledge, but also their feelings about the topic and the vocabulary they use.
  Example: A husband and wife discussing whether or not to get their child immunized.
- Share what other people have said about an issue, and see how the group reacts. Be careful not to show any judgment about whatever statements you use.
  Example: "A child should never get immunized when he or she is sick."
- Present the group with photographs, and get their reactions to each one. For instance, show them photos of a variety of clinic settings. After showing each one, ask, "How would you feel about going to this clinic to get your child immunized?" "What makes you say that?" "Is there anything that might make you think otherwise?"

B. Preparing for In-Depth Interviews and Focus Group Discussions

Although in-depth interviews and focus group discussions differ in their execution, they require practically the same preparation. Begin by writing a discussion guide, then choose a facilitator and note-taker, schedule interview locations, and select and recruit individuals to interview. This section provides some guidelines for making these decisions and improving the reliability of in-depth interview and focus group results.

A discussion guide is a list of questions that helps the facilitator lead a productive and varied discussion on several key topics within an hour or two.

1. Write a Discussion Guide. Leading a discussion on several topics is difficult, even for the most experienced facilitators. A discussion guide is key to efficient facilitation. To cover all topics of interest, discussion guides list questions and sub-questions that need to be discussed in the time allotted. Although discussion questions will differ between topics, most discussion guides include:

a. ***Introductory Remarks.*** The facilitator introduces herself or himself, and the note-taker. S/he also:

- Explains the general reason for the discussion and lets participant(s) know that their ideas are valuable. Reminds participant(s) that there are no right or wrong answers.
- Explains that notes will be taken and recorded to capture important ideas and comments.
- Asks permission to record and assures participants that their comments will be kept confidential.
- In a group setting, asks participants to introduce themselves using first names only.

b. ***Ground Rules.*** In a group setting, the facilitator will need to explain the ground rules for how the group will operate. Ground rules usually include:

- **Logistics,** such as the timeframe for the discussion, restroom breaks, and availability of refreshments;
- **Group etiquette,** such as the importance of talking one at a time, respecting divergent opinions, and not needing a response for each question from every participant; and
- **Encouragement,** such as telling participants that you are available to answer questions after the session and reminding them that they are the experts and that you want to hear from all of them.

c. ***Discussion Questions and Topics.*** A discussion guide includes a list of questions, ranging from general to specific, that a facilitator will ask during a discussion. How these questions are designed and worded can make a difference in data quality. Qualitative research uses open-ended questions, requiring participants to respond in their own words. Be sure to design questions that are unbiased and non-threatening to participants who might know very little about the topic at hand. Questions should give them a chance to respond from their own experience. Figure 11 provides guidelines for designing discussion questions.

d. ***Conclusion.*** At the end of the discussion guide, include questions that help process the information that participants have shared. These questions should help identify and refine key themes and test the depth of participants' feelings about them. They should also encourage participants to share any last thoughts on the discussion topic. A sample focus group discussion guide can be found in Appendix 1.

Allow the Topic of Discussion to Emerge Slowly

The introduction to a focus group sets the tone for the discussion. The ultimate topic of discussion should emerge slowly and naturally within the discussion context. This way, participants can reveal what they know about the subject, whether they feel it is important, and how it relates to other issues in their experience.

Imagine, for example, that you are invited to participate in a focus group discussion about health issues. The facilitator might start by asking you to name the three most important things you can do to ensure your children are healthy. You might respond: "Feed them," or "Take them to the doctor," or "Keep them warm." Perhaps the word "immunization" doesn't even come to mind.

By letting the subject of your discussion emerge naturally, you will learn a great deal about your audience and how they feel about the topic in relation to other issues and priorities.

Figure 11. **Principles of Question Design**[18]

How questions are stated can make a big difference in the type of response received. When developing your discussion guide, check the questions against the following principles of question design. You can also use this list to evaluate the flow of the discussion:

- **Use open-ended questions to solicit longer, more thoughtful responses.** *Example:* "What have you heard about immunizations?" or "What happened when you took your child to the clinic to get immunized?"
- **Use probing questions as a follow-up to an answer to help you understand why a participant responded in a certain way or to get more information.** *Example:* "You said *X*. Tell me, what makes you feel that way?"
- **Use closed-ended questions when you want a brief and exact reply.** *Example:* "How many children do you have?" Try not to use many closed-ended questions in discussion guides.
- **Avoid leading questions that impose assumptions or bias the responses.** *Example:* "Have you heard that immunizations are dangerous to children's health?" or "Are you bothered by this picture of a health worker vaccinating this child?"
- **Avoid questions that can be misinterpreted**. *Example:* "How many times did you take your child to the doctor last year?" could be interpreted many different ways. What kind of "doctor?" A regular physician, a traditional healer, a specialist? "Last year" could mean in the previous calendar year or in the past 12 months.
- **Be careful when enquiring about causality.** *Example:* "Why has this program immunized so few children when it cost so much money to fund?" People may not know what causes complex consequences. Instead, break the problems down into smaller pieces. First ask about issues facing an organization or community as a whole. Next ask about issues facing a department within the organization or a segment of the community. Then ask about how those issues affect respondents.
- **Avoid asking too many "why" questions.** *Example:* "Why didn't you go to the health center?" "Why" questions place respondents on the defensive. Ask instead, "What do you think about that?"
- **Beware of hypothetical situations.** *Example:* "What would you do if all your neighbors refused to have their children immunized?" People respond differently, depending on who is asking the question. People respond in the abstract but may not be willing to behave that way.
- **Ask one question at a time**. *Example:* "How do you feel about the views expressed so far about the safety of the measles vaccine?" rather than, "How do you feel about the safety of the measles vaccine, and why?" Some respondents will become confused if they hear more than one question at a time. The note-taker will have greater difficulty in keeping responses straight, and one of your questions will probably not get answered.
- **Avoid supplying response alternatives**. *Example:* "What led you to this immunization program—that it's known as a quality program, or that the clinic is near your home?"

2. Select a Facilitator. The facilitator is the person who leads the individual interviews or FGDs. The most important characteristic for a facilitator is that s/he be able to rapidly establish good rapport with the participants. The participants need to feel comfortable so that they are willing to speak candidly. The facilitator, in the case of a group discussion, should be skillful at handling the group process so that s/he can stimulate a discussion among all group participants rather than hold a question-and-answer session. Figure 12 provides advice for facilitators.

a. ***Characteristics of a Good Facilitator.*** The facilitator doesn't need to be an expert in the subject matter being discussed, but s/he should have a good understanding of the topic and the issues to explore in depth. A good facilitator builds rapport and trust. S/he probes responses without reacting to, or influencing, the respondents. People who like being around other people and who are good conversationalists usually, with practice, become good facilitators. Those who are used to telling people to do things—such as doctors, teachers, and nurses—sometimes find it difficult to curb this tendency and to become skilled listeners. But this, too, can be altered with good training and practice.

b. ***Gender Considerations.*** Choosing whether the facilitator is a man or a woman depends on the research subject and the local cultural norms. Participants may be equally comfortable speaking with a male or female facilitator if the discussion topic is not emotionally charged or considered sensitive. Subjects that are more challenging to handle because they are not typically addressed openly may need special consideration when selecting the gender of the facilitator. Depending on local customs and cultural norms, it may be more appropriate to have a facilitator who is of the same sex as the participants. Yet, in some instances, an opposite sex facilitator or "outsider"—someone from another country or region, for instance—might be viewed as more neutral by the participants and, therefore, be more effective as a facilitator.

3. Select a Note-Taker. The facilitator is assisted by a note-taker who objectively and carefully records what participants say. A good note-taker should also record nonverbal responses that can convey attitudes or sensitivities. Select a note-taker who writes quickly, can use abbreviations and symbols, and knows the language of the respondents. Useful skills for a note-taker include a good memory, the ability to listen carefully, and the ability to concentrate on all that is said and how other participants react to what is said. Figure 13 provides a list of tips for the note-taker.

Figure 12. **Tips for the Facilitator**

- **Take time for introductions**. Making participants feel comfortable at the beginning can avoid problems later. You might even tell participants something personal about yourself to help them feel less intimidated by you.
- **Open the discussion with a statement**. *Example:* ″We are here today to talk about health issues. We would like to hear your opinions and learn more about your personal experiences with health care in this town.″ Wait for participants to comment. Starting with a question can make the group expect a question-and-answer session and can discourage discussion.
- **Practice "sophisticated naiveté."** *Example:* ″Oh, I didn′t know that—tell me more about it.″
- **Make incomplete statements** and wait for responses. *Example:* ″Maybe going to the clinic isn′t so. . .″
- **Use silence** to your advantage. A lull in the conversation may compel participants to speak.
- **Prevent people from wandering off the topic**. When this happens, you might:
  - Hold up your hands and say, ″Wait—how does that relate to ___?″
  - Say, ″Interesting point. But, how about ___?″
- **Include those sitting next to you** in the discussion. The tendency is to relate more actively to those seated across from you because you have direct eye contact. If several group members are shy, ask them for their opinions, especially early in the discussion when the questions should be easy and non-threatening.
- **Try to link ideas and identify patterns**. Confirm these patterns with the participants by saying ″I′m hearing that _____ is important to many of you. Can you tell me more about this?″
- **Keep recording the conversation as the session breaks up**. People tend to say things to you that they may not want to say in front of others. Sometimes, it′s a good idea to pretend the discussion will end soon by saying, ″Oh, our time is running out.″ This may encourage participants to speak up.
- **Evaluate each session.** After the discussion is over, think about both the good moments and the not-so-good moments to learn from the process and enhance your skills. Ask the note-taker for suggestions on how s/he might have handled the group. Facilitators become more and more skilled as they discuss and think about their experiences.

Figure 13. **Tips for the Note-Taker**

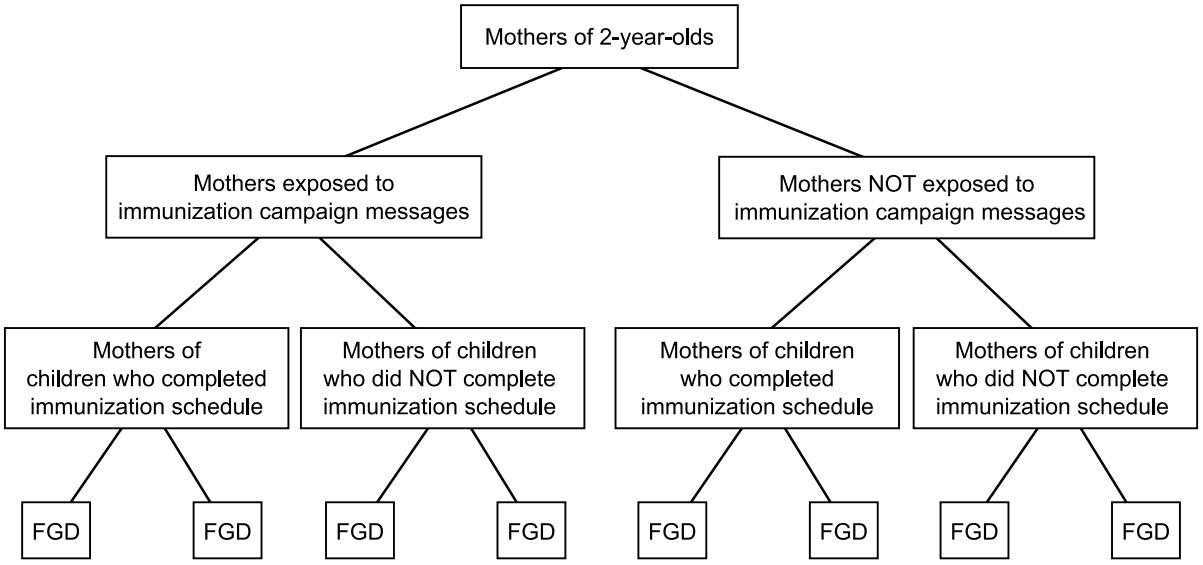
- **Work as a team with the facilitator,** and communicate before, during, and after each discussion. Before beginning a discussion, carefully review the discussion guide together. Agree on nonverbal cues to indicate that a comment is important and should be included in the notes or requires elaboration. After the discussion, clarify notes and compare your impressions.
- As soon as everyone is seated**, make a seating chart.**
- **Indicate who said what** at key points in the notes; this will make it easier to reconstruct any missing data after the focus group.
- **Don't let a tape recorder substitute for good note-taking**. Although sessions should also be tape recorded, problems during recording are very common, such as too much noise, dead batteries, or forgetting to turn over the tape. Therefore, good notes should always be taken.
- **Use abbreviations, and record relevant information**, major ideas presented, and useful and interesting anecdotal examples. Because the conversation can be very rapid, it is unrealistic to expect to write verbatim everything that was said during a discussion.
- **Record nonverbal feedback** such as facial expressions, tone of voice, laughter, and posture. These cues may suggest attitudes or unspoken messages. They must be interpreted in context, which only those present during the discussion can evaluate.
- **Ask for clarification if you miss something,** but don't become a second facilitator.
- **Use the tape recording only to fill in gaps.** Transcribing tapes takes many, many hours, adding unnecessarily to the cost and time of your materials development project.
- Remember that the quality of the notes will directly influence the quality of the data analysis and message development. **Take good, thorough notes!**

4. Decide How Many Focus Groups or Interviews to Conduct. Try to conduct discussions with people who have similar characteristics to those in your intended audience—for example, age, parental status, and experience with immunization. This will help confirm findings and ensure that all common informational needs are addressed in the materials produced. To collect enough relevant information on a topic, conduct at least two FGDs for each participant category. Figure 14 provides an illustrative example. If perceptions vary, and the direction for message development is unclear, additional groups may be helpful.

5. Schedule Interview Sites. Conduct in-depth interviews or focus group discussions in a quiet place that's easy for participants to access. Always schedule focus groups beforehand and choose a time of day that is convenient for participants.

For a group discussion, the space should be large enough to accommodate the facilitator, the note-taker, and six to ten participants. The setting should promote comfort and ease among the participants. It should allow for everyone to be seated in a circle so that the facilitator and

Figure 14. **Example of Organizing FGDs by Participant Characteristics**



note-taker can clearly see and hear everyone and so that there is no "head of the table" or leader image.

6. Recruit and Screen Participants.[19] Focus group and interview participants should reflect your intended audience as closely as possible so you can create messages and materials that resonate with the intended recipients. Develop a questionnaire to screen potential in-depth interview and focus group participants before they are invited to join a discussion. Take care to use unbiased channels to recruit and screen participants. For example, rather than rely on health clinic personnel to recruit women from the clinic patient pool, you may want to recruit in a neutral area, such as the marketplace. There, you can recruit those who go to the clinic, as well as those who do not. House-to-house recruiting is another, although more time consuming, recruiting technique.

a. **Recruiting for In-Depth Interviews.**[20] In-depth interviews can be planned or spontaneous. Planned interviews are scheduled in advance and should take place in locations convenient for the participants. When interviews are scheduled in advance, respondents generally have more time to think about and discuss the topic. Intercept interviews are unscheduled and occur in places where audience members are commonly found. As people who might fit the desired characteristics pass by, the interviewer asks if they have time to participate in a brief interview. First, the interviewer asks them questions from the screening questionnaire. If the person fits the intended audience characteristics, the interviewer invites the participant to participate in the interview.

b. Recruiting for Focus Groups. Each focus group should include people who share similar characteristics such as age, sex, socioeconomic status, and literacy and educational levels. People are more relaxed among others with the same or similar backgrounds. Avoid putting participants in a focus group with people whose presence may keep them from saying what they truly think or feel about a topic. In addition:

- To help ensure that responses are spontaneous and uninhibited, participants should not know each other. How to recruit participants whom you do not know, who do not know each other, and who fit your participant description may require some creative thinking.

  However, in some circumstances, participants will need to have had prior contact. For instance, if you were developing materials to try to standardize knowledge about immunization practices in a hospital, then FGD participants would need to be colleagues from the hospital.

- Remember to invite extra participants for each focus group since, as a general rule, three to five of those invited will not show up.

- To avoid having someone who does not fit the criteria arrive for the discussion, administer the screening questionnaire when recruiting, then administer it again just before the discussion begins. This is especially important if you relied on others to recruit participants. If people arrive who do not fit your criteria, you may invite them to another group, interview them separately at another time, or simply explain that you cannot include them in the current focus group.

- Often, officials or influential people will assume that they should be involved in recruiting for or attending a focus group. You can tactfully avoid this situation by explaining to the officials or community leaders the importance of inviting neutral participants and allowing them to speak freely, without an influential individual listening in.

- If circumstances have forced you to include participants who do not match your selection criteria, be sure to document these recruitment drawbacks or shortcomings in your research report so that the reader does not misinterpret the findings.

c. Using a Screening Questionnaire. Use a screening questionnaire to make sure your participants represent your intended audience. The form shown in Figure 15 and also in Appendix 2 is an example of what PATH uses to screen potential participants. This form may be adapted to suit each project.

d. Conducting the Screening. Your introduction should be brief. Describe who you are and the general purpose of the research—for example, "We want to learn more about the health care services available in the community." To be sure that you can get spontaneous responses, don't tell participants the exact subject of the discussion before the IDI or FGD. Include questions that apply to each criterion or characteristic of your intended audience—for example, age, parental status, and experience with

immunization. Make sure the questions are direct, simple, and nonthreatening. Determine immediately if the person fits the criteria, and invite only those who meet all criteria. Then provide the details of date, time, place, duration, and any special incentives.

Figure 15. **Sample Participant Screening Questionnaire**

Date ***July 6, 2002*** Place ***Market***

Hello, my name is ***Sandra*** and I am working for ***the health clinic*** on a research study with mothers about their family's health. May I ask you a few questions to see if you are among the people we are trying to reach?

1. How old is your youngest child?
   - ☑ 5 years or less
   - ❑ Older than 5 (don't invite)
   - ❑ No children (don't invite)
2. Have you ever worked at a health center or been a health educator?
   - ☑ No
   - ❑ Yes (do not invite)
3. Where do you live? ***Miraflores***
   - ☑ Rural area
   - ❑ Urban area (do not invite)
4. Have you ever had your child vaccinated? (Vaccinations are medicines given to young children to prevent them from getting illnesses that can make them very sick or even cause them to die.)
   - ❑ Yes (Consider for subgroup 1 or 2)
   - ☑ No (Consider for subgroup 3 or 4)
5. What is the highest level of schooling that you completed?
   - ☑ None, to some or all of primary school (subgroup 1 or 3, depending on answer to #4)
   - ❑ Some or all of secondary school (subgroup 2 or 4, depending on answer to #4)
   - ❑ Some or all of university (do not invite)

Determine if respondent should be invited and, if so, to which subgroup.

Subgroup 1: Vaccinated, primary school or less
Subgroup 2: Vaccinated, secondary school
Subgroup 3: Not vaccinated, primary school or less
Subgroup 4: Not vaccinated, secondary school

If you invite her, inform her that the discussion could last up to two hours. Tell her about any incentives she will receive for her participation. If she accepts, confirm the date, time, and place with her. Ask her name and how she can be contacted. Thank her for her time.

Notes:

Subgroup invited to ***Group 3, July 11, 8:30 a.m.***
(number, date, time, place)
Name of screener/recruiter ***Sandra***
Participant's name and how to contact ***Niko – at the church***

C. Conducting the Research

If you are fully prepared, conducting the actual research can be fun and informative. Following are a few additional tips to keep in mind during the sessions.

1. Set the Tone. In the introductory phase, you'll want to set a tone that establishes a safe, comfortable climate—one where respondents can debate, discuss, agree, and disagree with each other; brainstorm creatively; and struggle with complicated issues. Without a sufficient warm-up period, respondents will most likely falter or express resistance when key questions are presented.

2. Use the Discussion Guide Appropriately. Even if you are a very experienced facilitator, using a discussion guide to help you conduct interviews and focus group discussions will facilitate analysis later and will help ensure consistency in the type of information sought from each group or interviewee. Use the guide to ensure all the key topics are discussed, but don't try to follow it strictly. Let the order of the topics vary, depending on the participants' interests and concerns.

IDI AND FGD FLOW

Introduction

- Introduce yourself and the note-taker.
- Explain the reason for the discussion, and tell participant(s) their ideas are valuable to your work.
- Explain that notes will be taken and that the discussion will be recorded so that ideas and comments can be remembered after the session.
- Ask the participants for permission to record, and assure them that their comments will be kept confidential.
- Allow the participants to introduce themselves, using first names only.
- For an FGD, give the ground rules for how the group will operate—for example, setting the timeframe, taking restroom breaks, talking one at a time, respecting divergent opinions, not needing a response for each question from every participant, answering questions after the session, reminding them they are the experts.

Main Body

- *General topics.* Questions designed to open up the discussion, allowing participants to reveal general perceptions and attitudes and feel comfortable.
- *Specific topics.* Questions that reveal participants' attitudes and perceptions, as well as key information that shows how participants make decisions.
- *Probing.* Questions designed to clarify a statement or response or to reveal more in-depth information. Questions to check out hunches, ideas, and conclusions with the group members, with ample time for further debate. Probing questions are raised as needed throughout the discussion.

Conclusion

- Ask questions aimed at identifying key themes that emerged from the discussion, and allow the participants to refine these themes.
- Summarize and test with the group the relative weight of certain categories of responses.
- Identify differences of perspective, contrasting opinions, and areas of agreement.
- Allow a round of final comments and insights.

3. Identify Patterns. As the facilitator moderates, it is absolutely critical that s/he look for similarities or patterns surrounding key issues. These patterns should be identified and confirmed during a discussion to make sure they are accurate interpretations of what participants are saying—or leaving out. The facilitator should also ask questions to try to identify the underlying causes for these patterns. If patterns are not spotted until after the session—by listening to the tapes and reviewing the notes, for example—the facilitator should add questions to the discussion guide to explore the pattern in future groups and interviews.

Remember that probing questions yield useful messages. The responses they reveal are the key pieces of information that are needed to ensure your messages are on target.

Is There a Pattern Here?

Toward the end of a group discussion on immunization in India, a facilitator started to recognize a pattern she had not expected to find. She asked participants: "During our discussion one of you said that getting your child immunized might make your child sick by giving her or him a fever. Later someone else said that after her child's immunization, the baby didn't want to play as much for several days and wasn't as active as she usually is. Someone also said that her baby didn't eat very much for several days after her immunizations."

The facilitator then followed up with probing questions to better understand how participants felt about the fear of illness as a side effect of vaccination:

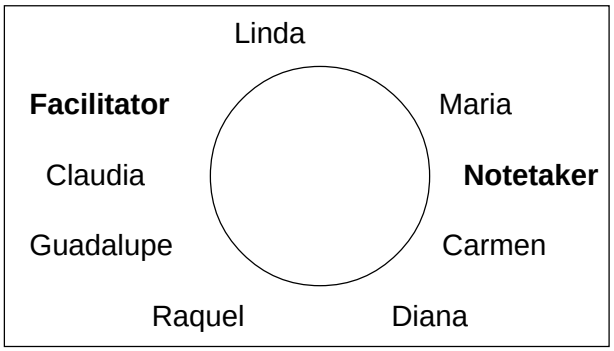
- How would you describe the effect immunization has on your child?
- Do I understand correctly that you feel your child might be made "sick" by an immunization?
- How do your feelings that immunization might make your child sick in the short term affect your willingness to get your child immunized?
- Do you feel it is worth getting your child immunized, even if you think it makes them a little sick temporarily?

By recognizing the pattern and underlying issues, the researchers were able to design messages to encourage parents to immunize their babies, even if it makes them a little sick at first, because it may save their lives in the long term.

4. In Focus Groups, Let Everyone Speak. Give each participant opportunities to speak during the focus group. As participants introduce themselves, the facilitator and note-taker should each create a seating diagram (see Figure 16) of the participants to make it easier to refer to them by name during the discussion and in the notes.

It is useful during the beginning of a focus group to place a checkmark on the participant seating chart next to each participant's name when s/he speaks. This will help the facilitator keep track of who may be dominating the conversation and who may not be expressing their opinion often enough. The facilitator can then encourage the quieter participants through nonverbal signals, such as looking at them or turning toward them when asking a question, or gently encouraging them to speak by using their name, "Do you have anything else you would like to add to the discussion, Maria?"

Figure 16. **FGD Participant Seating Chart**



5. Do Not Answer Participants' Questions Until After the Discussion. Sometimes participants ask the facilitator questions or give incorrect information during the FGD or interview. The facilitator naturally wants to help by answering questions or correcting errors. However, this should never be done during the session. Instead, the facilitator should refer the questions back, for example: "What do you think about Maria's question, Carmen?" If a facilitator begins answering questions during the session, participants will stop giving their own ideas and will turn the discussion into a teaching session instead of a research activity. If participants persist in asking questions, the facilitator should assure them that time will be provided 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.

6. About 15–20 Minutes Before the End of Your Allotted Time, Let the Group or Interviewee Know that You Are Nearing the End of the Discussion. Help identify key themes that emerged from the discussion so the participants can refine their ideas on these themes. Identify differences in perspectives, contrasting opinions, and areas of agreement. Get confirmation that you understood them correctly. Don't try to reach consensus on them or change participants' minds. Participants frequently speak up about issues at this time because they feel it will be their last opportunity.

7. End the Discussion on a Positive Note. After covering the topics in the guide, thank the participant(s) for their time and valuable insight. Provide refreshments for participants if they have come to you. It's a nice way to thank them for being a part of the process.

SUMMARY OF FOCUS GROUP PHASES

***Phase I:* Facilitator's Opening Statement**
- Introduces the facilitator and note-taker
- Explains the general purpose of the discussion
- Establishes the ground rules for the discussion and begins to develop rapport with and among group members

***Phase II:* Warm-up**
- Invites members to introduce themselves; gives everyone an opportunity to speak, which lessens anxiety; and stimulates participants to begin thinking concretely about the issues at hand
- Starts with neutral, topical questions to stimulate discussion, leads into general questions, and finally moves to questions about the primary topic

***Phase III:* Main Body of Group Discussion**
- Using open-ended questions, the facilitator probes, then follows up answers to get more information, clarify points, and obtain increasingly deep responses to key questions
- Connects emergent data from separate questions into an integrated analysis
- Ensures that all participants who want to comment can do so

***Phase IV:* Wrap-up and Closure**
- Allows the moderator to review, clarify, and summarize main points arising in the discussion
- Checks out hunches, ideas, conclusions, and relative weight of responses with the group members, with ample time for further debate
- Allows a round of final comments and insights

D. Analyzing Qualitative Data

In-depth interview and FGD data analysis involves reviewing the statements made by participants to gather the following information:

- What the audience members already know
- What misinformation they have
- What they want to know
- What they need to know
- What they already believe and do
- Why they act the way they do

Some of the underlying factors or reasons for participants' behavior or beliefs should surface, as well as some "hints" for messages that may be used to persuade them to alter a behavior and lessen fears or doubts. Well-conducted IDIs and FGDs will provide data that can be used to improve or modify service delivery; develop information, education, and communication (IEC) materials; and design training programs.

1. Talk After Each Discussion. After each in-depth interview or focus group, or as soon as possible on that same day, the facilitator and note-taker should review the notes and write down overall impressions and themes while the conversations are still fresh in their minds—for

example, "Parents seem to think their child is fully protected from measles after only one shot." Then the facilitator and note-taker can review the discussion notes and discuss any surprising findings.

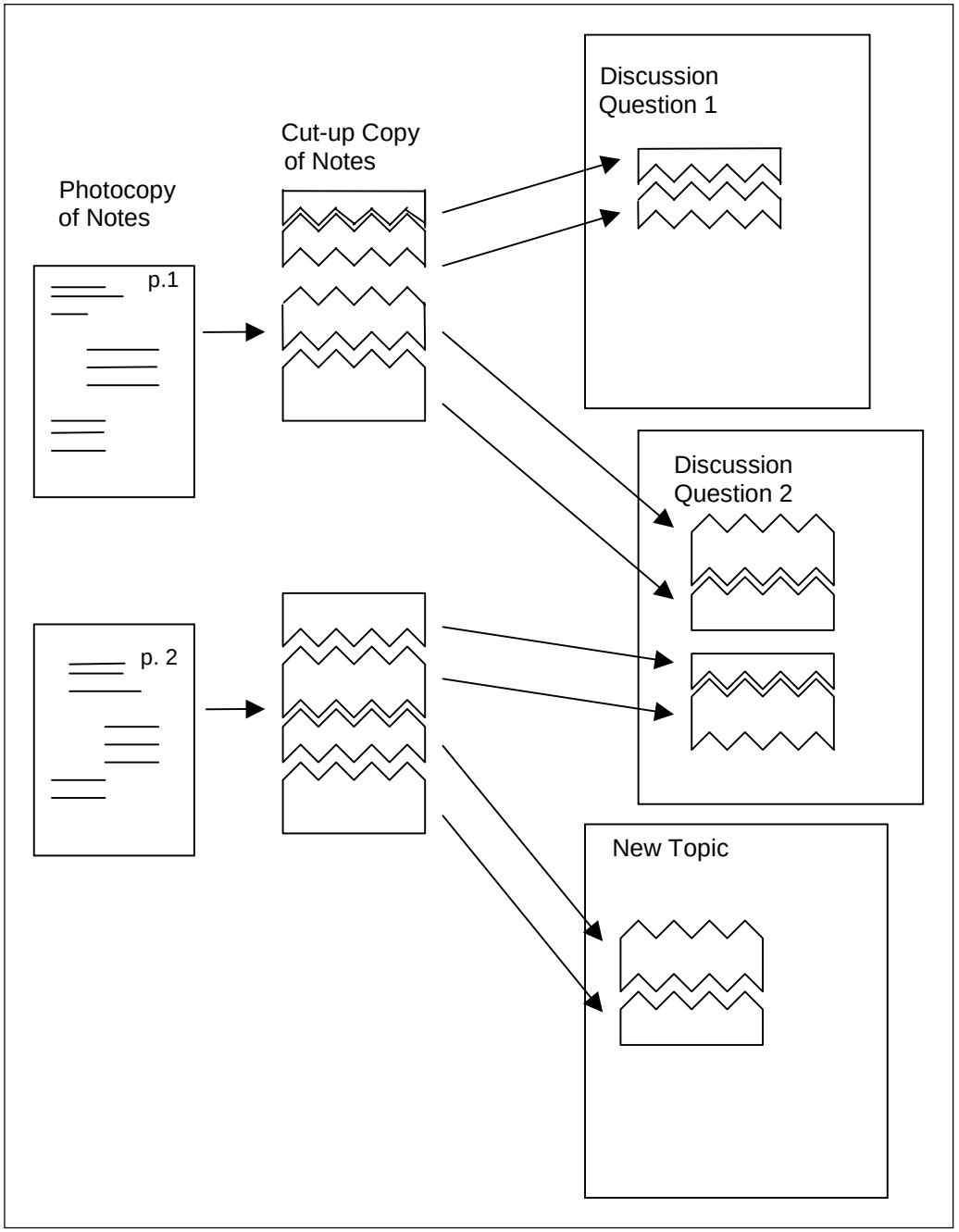
Often, emotional or unexpected events are forgotten as the team prepares for the next discussion. These initial post-discussion notes can capture key findings and the atmosphere of the interview or group. Remember that good data analysis requires good notes.

If you intend to record the session along with having a note-taker, be aware that tapes are primarily used to fill in gaps in the handwritten notes. Transcribing tapes is a very labor-intensive process, taking between four and ten hours to transcribe each hour of tape time, which makes it expensive.[21] The notes taken by the note-taker are the primary means of documenting the raw research data and should be thorough. Remember that the outcome of the research depends largely on the quality of the notes.

2. Organize Notes. After filling in any gaps, you may need to rewrite and organize your notes into major topic areas. Following is one method of organizing your notes. If you can't photocopy your notes, use colored pencils or highlighters to code them, assigning each main topic its own color. Use asterisks to mark quotable passages you might want to use in the report or materials.

- Photocopy your notes.
- Write the key questions or topics from your discussion guide on the top of separate sheets of paper.
- Using scissors, cut up the photocopy of your notes and glue all the information relevant to each discussion question on the appropriate sheet of paper (see Figure 17).
- Create new sheets labeled with appropriate headings for data that do not fit under your existing discussion questions. Try to group the new data by question or issue.
- Once you have cut and pasted all your notes onto sheets with headings, review the information gathered on each question.
- Review your organized notes to see if you can identify any emerging patterns that confirm or refute any of your assumptions about the research question—for example, "Most participants said ____;" "Some participants felt ___;" "Just a few participants said ___."
- Write a summary of the major findings for that question and, if possible, include some participant quotes supporting the finding(s).
- Decide if you need to add, change, or delete any questions in your discussion guide. Remember not to automatically discount things that were mentioned by only a few people or that you had not expected to hear. If you suspect that there is an important underlying reason for a comment, then include questions about it in the discussion guide so you can confirm the finding next time.

Figure 17. **Organizing Your Notes[22]**



Identifying Patterns

Researchers conducting focus groups on immunization with parents did not expect to hear that fear of illness might dissuade parents from immunizing their children. But during a focus group session, three participants mentioned that children got ill immediately after being immunized. When the facilitator and note-taker reviewed their notes, they realized that fear of illness due to immunization represented an unexpected and important question. As they organized their notes, they created a sheet of paper labeled "Fear of Illness Due to Immunization" and, using the cut-and-paste method, placed all their findings about those fears on this sheet. They then drafted follow-up questions to add to the discussion guide for subsequent interviews and groups in order to check their findings.

3. Compare Data Across Interviews or Groups. After completing the IDIs and FGDs, compare responses across all the interviews and groups. Depending on what you find, you might need to develop different materials for different subsets of your audience—for example, new mothers versus experienced mothers versus fathers. Gather the responses for a specific question from all of the interviews and groups. Using the cut-and-paste method, write a summary for each question, including participant quotes and interesting patterns.

4. Write a Final Report. Summarize data from all the discussions in a final report. The length of the report will vary depending on the complexity of subjects researched and the number of in-depth interviews and FGDs conducted. The report should include the following sections.

- **General information about your methodology,** including the number of discussions conducted for each audience category, the location and length of each discussion, and the number and type of participants—for example, 10 community health workers from rural clinics, 15 doctors from urban facilities.
- **Major findings,** including a summary of how participants responded to the major research questions, patterns that emerged, and an explanation of why these patterns might exist. Indicate key differences in the way different groups responded to questions. Although it is inappropriate to quantify the number of similar responses to a particular question, it can be helpful to offer anecdotal examples or quotes that typify the responses given.
- **Recommendations** for improving communication or service delivery. Your recommendations should include an analysis of your audience characteristics, their informational needs, and their preference for receiving information.

Do Not Quantify

It is not appropriate to quantify qualitative data by counting or creating percentages for the number of participants in the interviews or groups who gave similar responses. Participants represent only a small proportion of the population, so you cannot generalize the findings to the entire population. Also, during FGDs, participants hear one another and might respond differently than they would one-on-one. If you need to generate percentages and other statistics, use quantitative research methods such as surveys instead of, or in addition to, IDIs and FGDs.

Step 3. Develop Messages

Step 3. Develop Messages[23]

A. What Is a Message?

A message is a short phrase or sentence that summarizes your story in simple and understandable terms. It's the "take-away" information that's repeated to friends, colleagues, and others. A good message is usually short, to the point, and interesting.

Examples of key immunization messages are:

- Immunizations save about three to four million lives a year!
- Still, every ten seconds a child dies of a vaccine-preventable disease.
- Immunizations are the most cost-effective health intervention available today.
- The average child in the developing world is ten times more likely to die of a vaccine-preventable disease than is a child in the industrialized world.
- The goal of the Global Alliance of Vaccines and Immunizations (GAVI) and its worldwide partners is to safely immunize every child.

B. What Does It Mean to Be "On-Message?"

When a public figure is giving a speech, s/he is reminded constantly to stay on-message. Essentially, it is a reminder to stick to the key points of the speech, to not get lost in the details, and to bring the audience back to the key points again and again. Staying on-message is key to every communications tool you create, no matter what the medium.

Never assume your audience will spend more than a few moments reading written materials or listening attentively to radio and television programs. State your messages early, state them clearly, and then state them again. If intelligible messages are missing from your materials, your audience will usually come up with their own messages—sometimes to your disadvantage.

C. How Many Messages Are Enough?

The number of messages to include in a material depends on how much time your audience will spend with it. For example, a billboard is an obvious example of a one-message medium. Passing drivers will give your billboard only a split-second of their attention. If your message is too complex, or if you're trying to convey more than one message, your viewer will likely miss your point completely.

A meeting with policy-makers may be an opportunity to present several messages in one sitting. During the meeting, you can focus on one message at a time, offering supporting data, answering questions, and asking for specific action. When you leave, you can distribute printed background materials to remind them of the key points of your visit.

Whatever your medium, try to present the fewest messages possible needed to get your point across. Highlight, repeat, and reiterate these messages throughout the material, using graphics, photos, and—for video—moving images to drive your point home.

D. What's "The Ask?"

One important thing to remember when developing your message(s) is what's called *the ask*. The ask is what compels people to take action. The action may be passive—for example, "appreciate your volunteer vaccinators"—or active, for example "take your child to be immunized!" Whatever it is you want your audience to do, state it as explicitly as possible in your materials.

E. What Makes a Message Effective?

Perhaps the best way to learn about developing messages is through politics. Watch any political campaign on television, and you'll begin to hear the same points driven home again and again—for example, "I will create more jobs!" Messages are often emotionally appealing, hard-hitting, fact-driven, and brief. When messages are crafted effectively, they are repeated in subsequent newspaper headlines, television news programs, and radio reports. In short, they're remembered.

To craft an effective message, follow these steps:

- **Analyze and Determine Needs.** Focus group discussions and in-depth interviews with your intended audience will reveal their informational needs. Perhaps they need a simple reminder each month to visit a health clinic. Or maybe they need to learn more about the prevalence of a particular disease. Each key message should address one particular informational need.

- **Determine the Ask.** Ultimately, what do you want your audience to do, feel, or say? Be specific. It's one thing to tell mothers that many children are not fully immunized. It's another to tell them *their* child may not be safe. An effective message might be, for example, "Is your child safe from all preventable diseases? Visit a free clinic this Sunday and get her immunized."

- **Draft Key Messages.** Start by outlining the informational needs of your audience. Think about the key points you want to make to them, what you want them to remember, and what you want them to do. Try to condense these key points into single sentences. Imagine what you want your audience to remember. If they were only scanning your written materials and reading headlines, what should those headlines say to best convey your message?

- **Choose an Appropriate Tone.** The message tone is determined by the topic, type of material, and audience. The tone may be humorous, didactic, authoritative, rational, or emotionally appealing. It may be intended as a one-time appeal or as repetitive reinforcement.

- **Reinforce Messages With Visuals.** Visual aids are especially important because they help your audience understand and remember your messages. Whenever possible, provide charts, pictures, photographs, figures, or moving images that illustrate your point. These visual aids will do more to communicate your message than any printed words.

- **Customize Your Material to Your Audience and Medium.** In print materials for low-literate audiences, the text should be concise and should reinforce each illustrated message; likewise, the illustrations should help communicate the written messages. In print materials for literate audiences, lay out the text logically, using language that is appropriate for that audience. For example, don't use highly technical or medical terms in materials for policy-makers. For radio, the message should be incorporated in a way that captures the listeners' attention. For video, the audio and visuals should support each other in conveying the messages. For computer-based media, all of the above could apply.

Figure 18 provides suggestions for designing effective messages and materials.

***Figure 18*. Guidelines for Designing Messages and Materials**

Use the following guidelines to design your materials or evaluate the quality of drafts presented to you. These principles apply to print, radio, and video, except where specified for a particular medium.[24]

- **Present one idea.** Each material should have one main message.
- **Use a credible source.** Feature a source of information that is suggested by the audience as credible and appropriate—for example, doctors, other health workers, or community opinion leaders.
- **Capture the viewer's or listener's attention.** All parts of the presentation should grab the attention of the audience as soon as they see or hear the material. Make them feel part of the problem and the solution. Involve them with your images. Try innovative ideas and formats—for example, by using audience testimonials. For radio and video, you may want to start out with a "mini-drama" format, or one narrator with appropriate background music or a few musical notes to separate text and visual sequence. For print materials and video, images should represent objects, style of dress, building styles, and other elements that are familiar to the viewer.
- **Touch the heart as well as the mind of the audience.** Make the audience feel something after reading, hearing, or watching the material, such as being happy, confident, or enthusiastic that they can achieve something by adopting the proposed behavior. Make them feel that the material is addressing them directly.
- **Make the message relevant and related to real life.** If the message is important to the life of the viewer, it will probably be remembered. Make sure the presentation of the message reflects real-life situations.
- **Ask the audience to take action.** Be explicit about what the audience should do to resolve their problem. Too often, materials simply raise awareness of problems without offering concrete solutions.
- **Offer the unexpected.** The message is considered creative when it is fresh, novel, or original. Because of the unexpected, the message can break through the clutter and be recognized.
- **Provide consistency.** If you are producing more than one material, develop a recognizable, consistent sound or visual identifier to be used in all of your materials. This can be provided by a unique image, voice, face, song, sound or visual effect, or jingle that is incorporated into all of the materials. This identifier provides continuity for all of your materials.
- **Geographically customize your materials.** If appropriate, design materials that are tailored for each geographic region of the country. Materials produced for national distribution may not be equally suitable in all parts of the country.
- **Use the active voice.** "We vaccinated 100 children" sounds better than "One hundred children were vaccinated."
- **Use support statements and reasons why.** To simply say that your product or behavior will provide a benefit is not enough. You must explain why the audience should believe the promise of the benefit. The reasons a person should trust the product and key promise may be rational—epidemiological data, scientific evidence, or case studies, for instance, or emotional—the experiences of other credible individuals or their own experiences or feelings. For example: "When I take my child for her immunizations, it will give me a sense of security (*benefit*) because I know she will be protected from measles and other childhood illnesses (*support statement*)."
- **Restate and review repeatedly.** State important information twice, and include review sections whenever possible. Even a short radio spot, print material for low-literates, or video can and should repeat the main message at least twice. This will help the reader to understand and remember the messages presented.

Step 4. Create Draft Materials

Step 4. Create Draft Materials

Keep in mind that the first draft is not your final communication piece. Whatever you produce initially does not need to be perfect. You will only use it for testing, to find out if your intended audience understands and accepts it, and if it fits into your overall strategy. This section provides an overview of creating draft materials for print, radio, video, and the Internet.

A. Print Materials[25]

1. Organize Your Data and Messages. Once you have conducted in-depth interviews or focus group discussions to gather data on what your audience already knows and needs to learn, you can develop your messages and materials. The first step is to organize your data using a materials development worksheet (see Figure 19). List your findings in the first column and, in the next column, list messages that address the informational needs of your audience. In the third column, include a brief description, in words, of the illustrations, photographs, or actions that can support your message. In the fourth column, provide the text. Write the text in the language of your intended audience, using vocabulary that is appropriate for them.

Figure 19. **Sample Materials Development Worksheet**

Data	Message	Image	Text/Audio
A) Parents want to know what to do when a child has diarrhea.	A) Prepare ORS when a child has diarrhea.	A) Young child with diarrhea. Mother emptying ORS packet into 1-liter 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, be breast-fed, or eat soft foods.	B) 1. Mother breastfeeding child. 2. Father feeding child porridge; bowl on table with banana, eggs.	B) Breastfeed 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 down drain. Child lying on father's lap. Lamp on table.	C) The ORS stays fresh for only one night. Throw away unused ORS after this length of time and prepare fresh ORS.

(Appendix 3 provides suggestions for testing the readability of your text.) The text should be concise and should reinforce the information in the corresponding visual. As you strive to make these messages consistent with your program policies and activities, assistance from technical advisors can help ensure accuracy.

2. Select Visuals. 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 can help visualize each part of the message and 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 20 for a flip chart for health workers, teaching them how to use a new type of syringe, shows the artist the messages that need to be conveyed.

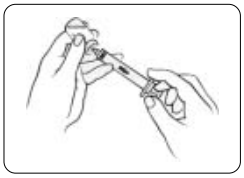
***Figure 20*. Sample Storyboard for Print Materials**

Subject: ***B-D SoloShot™ Syringe*** Date: ***June 9, 1992***

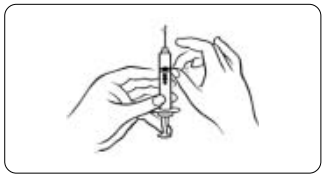
Audience: ***Health workers*** Size: ***8" x 5"***

Type of Material: ***Flip chart*** Number of Pages: ***11***

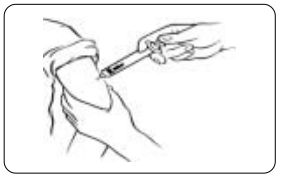
Developers: ***Becton-Dickinson & Co.***



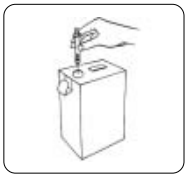
1. Insert the needle into vaccine vial. Slowly pull the plunger back to fill the syringe.



2. Remove the needle from the vial. Point needle upward. If necessary, slowly push the plunger to remove air bubbles and adjust the dose of the vaccine.



3. Ensure the injection site is clean, and insert the needle as you normally would. Slowly push the plunger to inject the vaccine.



4. Dispose of used needles and syringes properly.

The artist can prepare more than one version of the illustration or photograph if project staff are not sure how the message is best portrayed. This way, ideas can be compared for accuracy and effectiveness during pretesting and, ideally, will result in a new illustration that combines the best elements of each.

3. Add Text as Needed. Materials for literate audiences almost always contain text and usually have more text than pictures. Sometimes, IDI and FGD data reveal messages that are difficult to portray pictorially in a material for a low-literate audience. When this happens, you can use additional text to expand slightly on the illustration. For example, the first part of the message, "Immunizing your child will help her stay healthy, but it is not 100 percent effective," can be illustrated in a straightforward way by showing a young child receiving an immunization and then growing into a healthy adult. But it is challenging to illustrate the concept that immunization is not 100 percent effective. In this case, the text adds to what the picture conveys.

See Appendix 4 for more tips on preparing print materials.

B. Radio Materials

Writing scripts for brief, 30-second radio spots is a realistic task for those with little radio production experience. However, writing full half-hour programs, interview-type programs, dramas, and interactive programs requires professional expertise. If you want to do anything more ambitious than spots, hire someone already working in the medium. This person should have enough expertise to translate the content of your creative brief and your messages into the radio format so that it achieves your objectives.[26] See Appendix 5, *Hiring Experts,* for advice on selecting outside resources.

If you are writing your own script, use the information in your creative brief and in your materials development worksheet (Figure 19) to create the first draft of the radio script. The script should include suggestions for sound effects and music.

When writing a radio script:

- As in figure 21, the script is divided into two columns. The left column indicates to the director or the producer who speaks, at what moment, and in what sequence. It also gives instructions to the person in charge of the production.
- The right column tells the production staff the sound effect you want to be heard, or the inflection, modulation, or feeling you want the actor to convey. It also includes the pauses and sounds the actor should use.
- The instructions for the production staff are in capital letters. When they call for a sound effect, they are underlined.

See Appendix 6 for more tips on preparing radio materials.

Figure 21. **Caribbean Radio Spot on Measles**

OPERATOR:	**CAMPAIGN THEME**
Announcer:	(DEEP VOICE) Myths about measles. Myth Number One:
OPERATOR:	**TRANSITIONAL BREAK** (DISDAIN) Measles is nothing! It comes and it goes!
OPERATOR:	**SOUND EFFECT**
Announcer:	(DEEP VOICE) Now the truth.
Woman 2:	(CONCERN) Measles comes. . .and can take your child with it. (GRAVELY) Forever!
Announcer:	(INVITINGLY) If your child is between nine months and fifteen years of age, ask your health authority about Measles Elimination Month. (TRIUMPHANTLY) And make measles. . .history.
OPERATOR:	**CLOSING THEME**

Courtesy of HealthCom: A Toolbox for Building Health Communication Capacity

C. Video Materials

Producing a video—even a brief one—is a complicated task. For best results, hire a firm or individual with experience in video development, including scriptwriting, concept development, and storyboard production. Be sure to select someone who is open to the pretest and revision process and to the viewpoint that the audience is always right. The scriptwriter should have enough expertise to translate the content of your messages into the video format so that it achieves your objectives. The scriptwriter should also include suggestions for setting the video scenes, music, sound effects, and graphics. (See Appendix 5 for tips on hiring experts.)

You should be ready to hire an outside resource after you have:

- Defined what kind of video you are going to develop,
- Determined who your audience is,
- Written your creative brief,
- Gathered information from your audience on what they already know and need to know about the topic, and
- Organized your data and key messages in a materials development worksheet.

1. Concept Development. The video production consultant you have hired will use your creative brief (see Step 1, Plan Your Project) to define the visual images and script content for the final video. Using your brief, they should develop a concept as the first step in video production. This includes drawings, illustrations, or photographs that offer ideas for visuals—along with ideas for text.

Concept development is critical. It shows you immediately how well the consultant has understood essential information, from research results to your communication strategy. Also, at this point, you can correct any misunderstandings before investing money in the steps described below.

If the concept development meets your requirements, then the consultant proceeds to the next step, the storyboard. The storyboard will show the essential audio and visual elements of the video.

2. Storyboard and Script. The creative brief, materials development worksheet, and concept development are used to produce a storyboard. The storyboard displays the text of the key scenes, along with the key images for the video as it will appear on the screen. You should have enough drawings to match the primary lines for each scene spoken by the actors or the voiceover, as well as enough squares to give a full idea of the sequence of the visual images.[27]

Your consultant should present you with a script for the video that includes elements for the dialogue, visuals, music, sound effects, graphics, and pacing.

Figure 22 shows a script for a six-minute video on auto-destruct syringes. Its key message is that syringes should be used only once to reduce the risk of cross-contamination from repeated use.

Figure 22. **Sample Video Script**

VIDEO	AUDIO
Music up with title graphics	CROSS-INFECTION: BREAKING THE CHAIN
WHO logo (if permission is granted)	
USAID logo (if permission is granted)	
Becton-Dickinson logo	
Busy clinic setting	Natural sound
Nurse talking over video of clinic	"We know that unsterilized needles and syringes can transmit diseases from one patient to another. That's why it is so important to carefully sterilize reusable equipment or to make sure that disposable needles and syringes are used only once."
Close-up of nurse on camera	"It's not common, but sometimes health workers act irresponsibly and use disposable syringes and needles more than one time. These people need to realize that there is a real danger of cross-infection and that the contaminated needle or syringe could give some little child a deadly disease."
Clinic setting with nurse about to vaccinate child on mother's lap, mother talking to nurse	Clinic sounds up
Same nurse on camera from earlier	"Parents are frightened. Even in remote villages, many people have heard that AIDS and hepatitis B are easily spread by contaminated needles and syringes. We're worried that some of the parents may stop bringing their children for immunization for fear of cross-infection. We need a way to reassure them that all injections are safe."
Nurse opening box of auto-destruct syringes in clinic	FORTUNATELY, THERE IS A WAY. . .NEW SYRINGES THAT CAN BE USED ONLY ONCE. THE WORLD HEALTH ORGANIZATION, UNICEF, USAID, AND OTHERS HAVE DEVELOPED SPECIAL **AUTO-DESTRUCT** SYRINGES TO PREVENT CROSS-INFECTION.
WHO, UNICEF, or PATH expert in lab or office setting	"With auto-destruct devices, reuse is physically impossible. These new devices can dramatically decrease the chance of cross-infection. This means a lot less worry for program managers."

VIDEO	AUDIO
Same expert demonstrates SoloShot™ while talking	"There are several different auto-destruct syringe designs. In this case, the syringe is preset to be filled with a single, 0.5ml dose of vaccine, the standard dosage for many EPI injections. This feature promotes better immunization practices and also reduces vaccine wastage."
Demonstration is done by filling SoloShot™ with vaccine from a vial, then squirting it out into a transparent plastic cup on the expert's desk.	"Once a single dose of vaccine is injected, the plunger locks in place and the syringe can't be used again."
Newsletter logo and close-up from 1/18/91 *Weekly Epidemiological Review*	MANY PEOPLE RECOGNIZE THE TREMENDOUS ADVANTAGES OF AUTO-DESTRUCT SYRINGES. EPI'S GLOBAL ADVISORY GROUP HAS RECOMMENDED THAT `AUTO-DESTRUCT SYRINGES, AS THEY BECOME AVAILABLE, SHOULD BE PROMOTED IN AREAS WHERE DISPOSABLE SYRINGES ARE BEING USED.'
Cover of UNICEF supply catalog, then zoom to auto-destruct syringe line	UNICEF HAS ALREADY PURCHASED MORE THAN TWO YEARS' WORTH OF AUTO-DESTRUCT SYRINGES FOR DISTRIBUTION WORLDWIDE. THE SYRINGES WILL BE PACKED IN SPECIAL INCINERATOR BOXES TO MAKE PROPER DISPOSAL OF USED EQUIPMENT EASIER.
WHO, UNICEF, or USAID official	"The cost of auto-destruct syringes varies, but we believe that they are extremely cost-effective. Any additional costs paid for the devices will be saved many times over in the future. Treating patients with diseases like AIDS and Hepatitis B is very expensive. We can save money in the long run, and save a lot of lives, by preventing infection now."
Field shots in Pakistan clinic	HEALTH CARE WORKERS IN THE FIELD AGREE THAT THESE NEW DEVICES OFFER IMPORTANT BENEFITS. VACCINATORS PARTICIPATING IN THE FIELD TEST OF ONE AUTO-DESTRUCT SYRINGE PREFERRED IT OVER A STANDARD DISPOSABLE SYRINGE. THEY SAID THE AUTO-DESTRUCT SYRINGE WAS EASIER AND FASTER TO USE, AND ALLOWED THEM TO MORE PRECISELY ADMINISTER THE CORRECT DOSAGE.
Children in clinics with music under	AS CONCERNS ABOUT CROSS-INFECTION INCREASE, POLICY-MAKERS, PROGRAM MANAGERS, HEALTH CARE WORKERS, AND PATIENTS ARE SEARCHING FOR WAYS TO GUARANTEE SAFER INJECTIONS AND BUILD ON EPI'S SUCCESSES. AUTO-DESTRUCT SYRINGES WILL PROVE TO BE AN EFFECTIVE WAY TO HELP BREAK THE CHAIN OF CROSS-INFECTION.

Courtesy of PATH and Becton-Dickinson

Appendix 7 provides a glossary of video production terms to assist you in working with a video consultant. More tips on producing video materials can be found in Appendix 8.

D. Computer-based Materials

Computer-based media (CM) include any information products used on a computer. They may be simply electronic versions of pamphlets, radio spots, or videos you have already created, or they may include products designed to leverage special functions available only on a computer, such as interactive decision-making. Computer-based media may exist on a computer hard drive, on floppy disks, on CD-ROMs, or on the Internet—also known as the World Wide Web, or the Web.

1. Consider the Advantages and Disadvantages of Computer-based Materials.

The computer offers wide opportunities, but also presents many challenges for materials development. Think carefully before deciding to develop materials for the computer. Because this medium is new to many people, this section focuses first on the advantages and disadvantages of CM. It then takes a look at the types of CM you can produce, and concludes with an overview of the steps involved in developing CM products.

a. **Advantages of Computer-based Materials.** Computer-based products have many advantages over other media in their ease of use and distribution.

- Computers allow you to present many different kinds of media—text, pictures, audio, and video—all on a single machine.
- Computers allow users to search for key words and subject areas quickly and in a way not possible in other media.
- Interactive products can provide logical functions not possible in any other media.
- Electronic files are easy to transfer from one computer to another. Many books, pamphlets, and even radio or video spots can fit on a single CD-ROM. Small files can be distributed through email or from a Web site, saving on postage and other distribution costs.
- Users print what they need, when they need it. That saves you money, too.
- Documents on the computer can be organized so that users may easily select the level of information they need. The "Diseases and Vaccines" section of the Gates Children's Vaccine Program Web site (*www.ChildrensVaccine.org*) is a good example. The introductory page gives a one-paragraph overview of each disease. Clicking on a link takes the user to a more detailed, one-page document about the disease, and clicking again brings up an in-depth paper on the same topic.
- Much of the software needed to view CM files is free, although you must pay for the software required to create those files.[28]

Special Advantages of the Web. The Web is a virtual library of information available to any user who has access to the Internet. If you develop electronic material, you can put it on the Web to further increase its availability around the world.

- Once your computer files are on the Web, they can be accessed from any Internet computer.
- Users don't have to wait for you to mail them a document; they can usually download it right away.
- Materials on the Web are easy to update. Users can always get the latest versions, at little extra cost to you.
- The Web can offer immediate communication between you and users, through email, and between users and other users, through interactive Web forums.

b. Disadvantages of Computer-based Materials. Although computer-based media can be fun to create and distribute, the medium still has a few disadvantages that might make you less likely to consider it for your project. As computers continue to improve and their use becomes more widespread, however, these barriers may disappear and make computer-based media a more attractive option.

- Computers are much less common than VCRs, TVs, radios, and cassette players. They are more expensive and more difficult to maintain. Desktop computers are not as portable as those other devices. And laptop computer screens can be difficult to view, especially for groups.
- Many users, especially those in developing countries, do not have access to the Web or may find it too expensive or slow to use regularly.
- Computers have not been standardized in the same ways as VCRs and cassette players. Users can have many different computer setups, and electronic products may appear differently on different machines. New software may not perform well on older computers.
- Less experienced users may need your help in installing or using the software they need to view your materials electronically.
- Printouts usually are not the same quality as materials from a printing press. Many users will not be able to print in color.
- Testing computer materials is more difficult than testing other media because it is harder to "see" everything in the product.
- For multimedia and interactive media, you first need to create the separate print, audio, and video products you plan to use before you create the electronic materials. Computer media do not offer any shortcuts.
- Creating multimedia materials requires expertise in image, audio, and video processing on the computer. Creating interactive materials and Web sites often requires computer programming skills. You may need to hire consultants for this.

When Should I Create Computer-Based Materials?

Generally, use the least-complicated communication product needed to achieve your goal. Sometimes computer-based products are the right choice. Three criteria you must meet to justify the time and energy required to create computer-based products are:

- You want to complement other media you are producing, such as when you distribute electronic versions of printed documents, or you need interactive logic to accomplish your objective (see the section on *interactive products* below).

  and

- You're certain that your audience can use computer-based products. This means that they already have computers and know how to use and maintain them. Their computers also must be up to the challenge of your product—for example, their processor speed and hard drive space are adequate; they have a sound card and speakers for multimedia; they have a CD-ROM drive, if needed.

  and

- You're ready to support users by helping with installation and trouble-shooting. This is especially true for multimedia and interactive products.

2. Decide What Type of Material to Produce. Following is an overview of the three most common types of computer-based products: distribution, multimedia, and interactive. While you may find different names for these materials, the general principles of each still apply. All of these products can include existing or new electronic files. You will need to convert existing print, audio, and video products into computer files before adding them to a computer-based product—or hire a consultant who is already an expert in that process.

a. **Distribution Products.** This is the simplest form of computer media. It can be as simple as a collection of files on a floppy disk. Or you may wish to add a simple interface—what the user sees on the screen—to help users identify and access the files on the disk.

   Explaining the advantages of distribution media is perhaps best done by example. The Global Alliance for Vaccines and Immunization (GAVI) recently created a CD-ROM containing electronic versions of many immunization-related print documents, a nice collection of photos from UNICEF, and the full contents of the GAVI and Gates Children's Vaccine Program at PATH Web sites.[29]

   - **Easy to Use.** The CD-ROM was created to make it easy for users to search for immunization-related materials and print or share electronic copies, as needed. Users can also view, and use, the photos without requiring that GAVI pay for expensive photo printing. This is important because most users might never need the photos. And, even users who do not have Web access can use the hundreds of documents available on the Web sites included in the CD-ROM.

- **Easy to Create.** A single person produced the GAVI CD-ROM in a few days. Considering the huge amount of information it contains, duplication was inexpensive. The GAVI CD-ROM cost about one dollar per copy, plus another dollar for the cardboard CD-ROM sleeve. Imagine what it would have cost to print those thousands of pages of text and photos instead! And CD-ROMs are much sturdier than floppy disks, an important consideration when mailing them internationally.

b. Multimedia Products. Multimedia products are similar to distribution products in that they contain different types of files, such as text, pictures, audio, and video. However, multimedia products include carefully designed interfaces that guide the user through the product and make the experience more satisfying. Of course, this means more work for the developer!

The "News Archives" page of the Gates Children's Vaccine Program at PATH Web site is a good, if simple, example of multimedia CM (Figure 23). The page contains a photo from the press conference in which Bill and Melinda Gates announced the new program—along with the full text speeches given by the Gates', Carol Bellamy of UNICEF, and Sir Gustav Nossal of WHO. There are also links to audio and video clips from those speeches.

Figure 23. **Gates CVP at PATH News Archives Web Page**

www.ChildrensVaccine.org/html/a-news.htm

Press Conference Excerpts

Bill Gates	**Melinda French Gates**
• Video and Sound • Sound Only • Transcript	• Video and Sound • Sound Only • Transcript

Make a Multimedia Screensaver

If you can create or save images on your computer, you can make an entertaining and educational screensaver!

Step 1. Decide what images you would like to show your audience. You can include a caption directly on the image, so users read your messages as they appear on the screen, or you can create sound files that play along with the images.

Step 2. Download GPhotoShow,[30] or similar screensaver creation software, from the Web and follow the instructions for use.

Step 3. Package everything on a floppy disk or CD-ROM; write an installation guide for your users, and distribute it to your key audience.

c. Interactive Products. Interactive products are the most complex and sophisticated of the three types. However, unlike the other types of computer-based media, interactive products make use of the unique power of the computer: the ability to process logical functions. Because they usually require someone who can write computer programs, they can be expensive to create.

What Interactive Really Means. The term "interactive" is often used inappropriately among product developers. Some developers call their software interactive just because it has buttons you can click to go from one screen to another—a process known as navigation—or links to play audio or video clips. But these simple actions can be found in distribution and multimedia products as well. At PATH, we define an interactive product as "one that solicits meaningful user input, such as answers to questions about who the user is or what he or she wants; the interactive software then uses logical algorithms, programmed by the developer, to respond to this input in a meaningful way." Figure 24 is an example of this.

Why Interactive Products Are More Difficult to Produce. Creation of the logical algorithms needed for interactive computer media is challenging, requiring knowledge of health issues, such as the factors that increase risk of exposure to HIV, as well as the ability to create computer programs or scripts. Furthermore, the software needed for development of sophisticated interactive CM is often expensive and difficult to learn.[31]

Figure 24. **Example of Logical Algorithms at Work in Interactive Media**

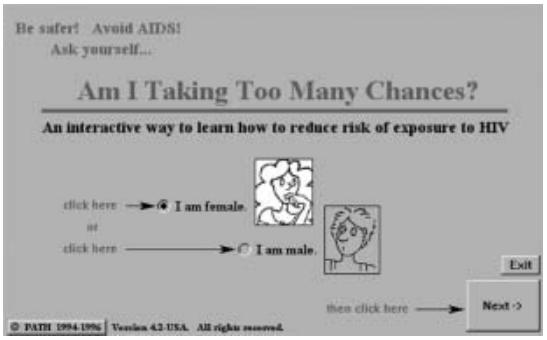


Illustration A

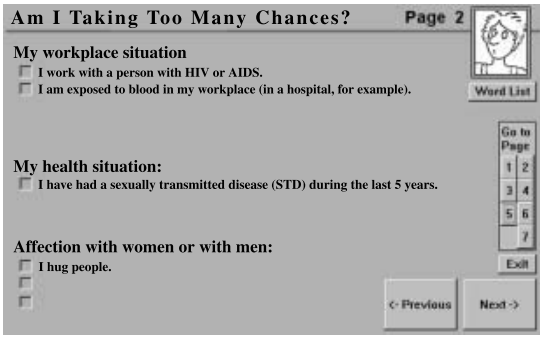


Illustration B

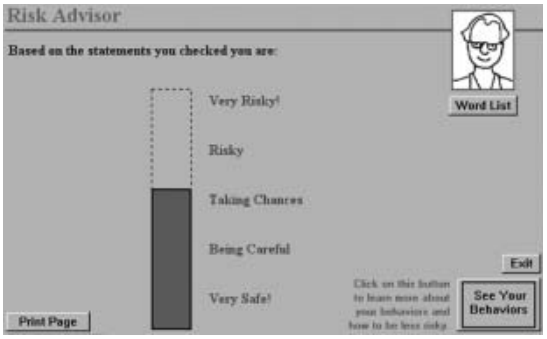


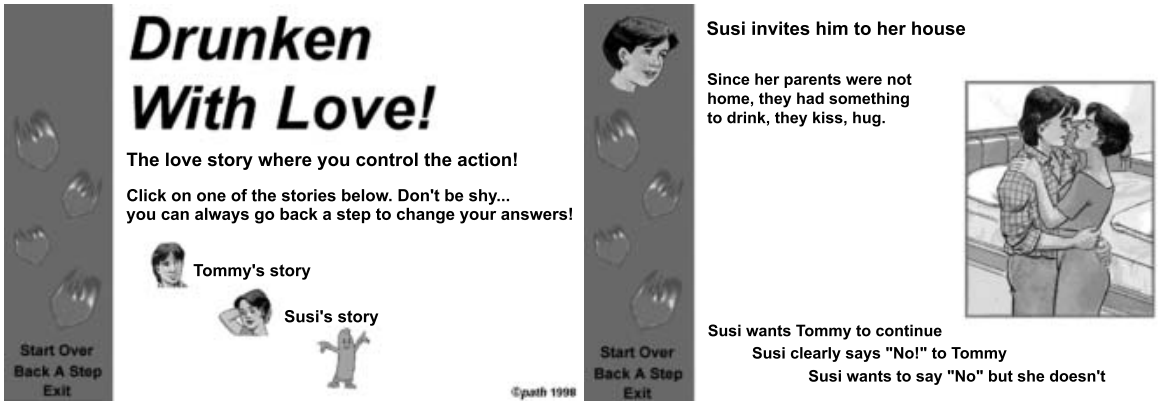
Illustration C

Based on user answers to questions about their sexual, and other, behaviors, PATH's "RiskAdvisor" software used complicated logical algorithms to generate a personalized "risk meter." The interactive CM helped users better understand their risk of exposure to HIV and how they could reduce that risk.

Make an Interactive, "Branching" Story

Not all interactive products are expensive or difficult to create. You can make an interactive story using hyperlinks in Microsoft PowerPoint or Microsoft Word,[32] two programs with which many people are already familiar. This does not exactly fit our definition of an interactive product, since the "branching" is really just moving from screen to screen—not a logical function, but clever developers can use simple screen navigation to create an engaging and educational user experience.

Interactive stories move forward based on choices the user makes. In a branching story about AIDS prevention developed in Indonesia, the first choice is whether the user wants to experience the story as a boy or as a girl. Clicking either link takes the user to text that introduces the character and the situation, for example, the boy and the girl are in a nightclub, but have not yet met. At the bottom of each page is a question with two or more choices. For example, after the boy notices the girl he must decide whether to approach her or not. After they meet, he must decide whether to offer her a ride home, then whether to accept her invitation to come into the house, whether to have a drink, whether to have sex, and whether to use a condom. Based on the choices the user makes, different events unfold.



3. Develop Computer-based Materials. If you have gotten this far, perhaps you are still intrigued by the idea of creating CM. Following is an overview of the steps involved in developing a simple computer-based product, with or without the help of an outside consultant.

a. **Consider Audience Requirements.** Before you decide to create computer-based materials, you must think about the audience who will use your CM.

Hardware and software questions:

- Does the typical user have access to a computer?
- What kind of computer? (processor speed)
- How much storage is available on the hard drive?
- Does it have a CD-ROM drive?
- What kinds of software can it support?
- Does it have multimedia capabilities?
- Does it have reliable and inexpensive Web access?

User-skill questions:

Is the user:

- Able to read and understand what appears on a computer screen?
- Familiar with computer software?
- Comfortable using a mouse?
- Able to locate files on a floppy disk or CD-ROM, if necessary?
- Comfortable using the Internet, if necessary?

b. Develop a Product that Suits Your Needs. This is a good time to ask yourself, once again, "Do we really need to create a computer-based product, or can we do the job in other, less complicated ways?" If you do not need a computer-based product, stop now. But if you feel that your communication objective requires distribution of large quantities of information, multimedia, branching logic, or logical algorithms, then proceed.

- **Make a List of Available Materials.** Start by listing the materials that you already have in their original form or as digital files—such as text from brochures, artwork, and audio and video clips. Also, list the materials that must be created from scratch.
- **Design an Interface for the User.** Think carefully about how to design the interface, as that will influence the experience of the user and the effectiveness of the product. Keep your interface as simple as possible. It is especially important not to go "icon crazy"—in general, the fewer icons you use, the better.
  - **Platform**. Whatever your feelings about Microsoft Windows™, you probably have to develop your product for that platform, since most business and personal computers worldwide use it. Only about 5 percent of computers worldwide use the Apple operating system, and another 10 percent use UNIX, LINUX, or Sun operating systems. You'll find that many graphic designers and publishing companies use Apple equipment and that many universities use UNIX or LINUX systems, but they might not be your intended audience. The good news is that the Web and Adobe Acrobat work on both the Windows and Apple operating systems.
  - **Touch Screens** can be a good choice for some settings, but they require special hardware and can be difficult to maintain. Touch screen interfaces must be designed with big buttons because fingers are much larger than a mouse pointer. This changes the look of your interface considerably.
  - **Fonts**. Be careful using fonts that do not come with Windows. If you design your product with a font that the user doesn't own, their computer will substitute some other font. This can dramatically alter the appearance of your product and can create other problems. This is also true of fonts for languages other than English. Fortunately, Adobe Acrobat is designed to help solve this problem; that is one reason so many people use it today.

- **Get Outside Help, If You Need It.** Creating computer code, or logical algorithms like that used in PATH's RiskAdvisor, is difficult and requires long and careful thought—and probably the help of a consultant. You may also need help learning how to transfer completed files onto a CD-ROM. It's not as simple as saving information on a floppy and requires special equipment that you may or may not have available on your computer.

File Size

Image, audio, and video files tend to be large. They are almost always distributed with some type of "compression" to reduce file size. There are drawbacks to compression, however, since the more you compress a file, the lower the quality of the picture, sound, or video clip. The trick is to find the balance between file size and quality. Often you'll need to experiment to find out what level of compression works best.

Here is a general rule for compressing images:

- If the picture is a line drawing or is made up of large areas of exactly the same color, save it as a ".gif" file. You'll find this option in any image processing software.
- But if the image is a photograph—color or black and white—save it as a ".jpg" file.
- If in doubt, save the image twice, once in each format, and compare file size and quality.

c. **Develop a User's Guide.** Unless you're creating a Web-based product, you'll usually need to write a user's guide. This document tells users about the product—remember, they cannot leaf through your computer files before installation—and provides instructions for installing the product, hints for solving any problems, and contact information for help. The user's guide does not have to be an expensive publication; most users will look at it only once. Concentrate on content, not on flashy style.

- **Print Instructions Directly on the CD-ROM Label and Sleeve.** It also is a good idea to print installation instructions directly on the floppy disk or CD-ROM label, and on the outside packaging, if possible, since the disk might become separated from the user's guide.
- **Create a "Read Me" File.** If you want to distribute the user's guide as a word-processed document or "read me" file, save it in "Rich Text Format" (.rtf) instead of the standard format for your word processor. All modern word processors can interpret .rtf files. Be sure to test the document after converting to .rtf, since some formatting options, like hyperlinks or fancy tables, may be lost.

- **Include Installation Files for Software.** If your product requires the free Acrobat Reader, PowerPoint Viewer, or a Web browser, such as Microsoft Internet Explorer or Netscape Communicator, provide the installation files directly on the floppy disk or CD-ROM. But first check to make sure that you can legally do so.
- **Be Available for Trouble-Shooting.** You can be sure that some users will have trouble installing or using your computer-based material. It may be a problem with their computer, it may be something they do not understand, or it may be a mistake you made. But you have to be ready to help them—otherwise all your development efforts will go to waste. One of the best ways to do this is to create a good trouble-shooting section for the user's guide and to provide contact information where people can go for help.
- **Test Computer-based Materials.** The content of computer-based material should be tested separately, in printed format, or radio and video format, if appropriate, before being tested as part of a computer-based product. After testing the computer-based media yourself and with colleagues in-house to make sure there are no technical problems, test the full computer-based product with members of the intended audience. Sometimes, it's best to simply observe the respondent working with the computer. You can quickly detect any problem areas by watching where they have difficulty navigating or accessing material. Be sure that they look at everything in the product.

Step 5. Pretest and Revise Draft Materials

Step 5. Pretest and Revise Draft Materials[33]

Pretesting, sometimes called field-testing, helps project staff know whether the intended audience understands and likes the draft materials before they are produced in final form. In pretesting, an interviewer shows the draft materials to members of the intended audience and asks open-ended questions to learn if the message is well understood and acceptable—in sum, if it works.

This process is crucial because illustrations, text, photographs, dialogue, sounds, music, graphics, moving images, and computer images can easily be misinterpreted. If audience members cannot understand the materials, or do not like them, the message is lost. It is also easier to change materials before they are finalized than to find out after investing time and expense that the materials are inappropriate.

A. Before You Pretest

1. Review Draft With Technical Team. Before going out to the field to test the material with intended audience members, conduct an in-house review. People who have technical expertise in the subject matter of your material can be particularly helpful here. The technical part of the message should have no errors; pretesting a material with factual mistakes would waste both effort and money.

Know that a delicate situation may arise from this step because members of the technical team may disagree about the way the message is presented—its color, characters, type of letters, drawings, sound effects, lighting, and setting. Remind them that members of the intended audience must decide, during the pretest, on these variables, and that you need only their assessment of the technical accuracy of the message.

2. Do a Quick In-House "Test". By showing the draft to people who work inside your organization and who are part of the intended audience, you may catch obvious errors before you pretest in the field—errors such as the negative impact of colors or sounds, or music out of sync with the dialogue. Correcting these errors now will allow your pretest in the field to focus on primary issues.

For an in-house test, look for people in your organization who are comparable in status to the intended audience—from janitors to chauffeurs, messengers to office assistants, health workers to teachers. If people similar to your audience are not available in house, proceed directly to pretesting with members of the intended audience in the field.

B. Measuring Variables

Pretesting measures five variables:[34]

- **Comprehension.** Comprehension includes the clarity of not only the content of your material but also how it is presented. A difficult or unknown word may prevent the audience from understanding the entire message. Or, it may be that the message is clear and the language appropriate, but the typeface used is too small, making it difficult for the audience to read the message. Also, the transmission of too many ideas could confuse the audience and make them miss what you want them to do. Materials should accomplish your strategic objectives. If your strategy calls for the materials to evoke a mother's tenderness to her infant, make sure your audience can see this in the message.
- **Attractiveness.** If a material is not attractive, many who see or hear it will not pay much attention to it. A poster may go unnoticed if it has been printed in a dull color or if the illustration is irrelevant or of poor quality. A boring radio program may encourage listeners to change stations. Attractiveness in materials is achieved in print materials through visuals such as color, illustrations, and photographs; in radio, through sounds such as music, tone, and format; and in video, through movement, action, illumination, animation, music, and sounds. Computer-based materials can combine any or all of these—ease of use will also enhance their attractiveness.
- **Acceptance.** The messages and the way they are communicated must be acceptable to the intended recipients. If the materials contain something that offends, is not believable, or triggers disagreement among the intended audience, audience members will likely reject the message conveyed.
- **Involvement.** The intended audience should be able to identify with the materials and recognize that the message is meant for them. People will not pay attention to messages that they believe do not involve them or are not specifically directed at them. To ensure that the intended audience will perceive communication materials as actually involving them, make sure you use symbols, graphics, and language they understand. Illustrations and characters should faithfully reflect that population segment, along with its environment and characteristics, such as clothing, hairstyles, furniture, and building style. Remember, too, that some will want to see people different from them so that they don't feel singled out.
- **Call to Action.** The materials should indicate clearly what you want the intended audience to do. Most materials have a message that asks, motivates, or induces members of the audience to carry out a particular action. No matter how good a communication material is technically, it will be worthless if it fails to transmit a do-able message. Even materials that create awareness should induce the listener or viewer to at least seek more information on the subject, moving him or her to take steps that will lead to the required action. Note: If, for whatever reason, the material does not ask for action, this point is not pretested.

C. Multiple Rounds of Pretesting and Revision

You can pretest materials with one individual at a time or with groups, depending on the material and the audience. Most materials need to be pretested and revised several times before they are finalized. Each new or revised version is tested again until you are satisfied that the material is well understood by—and acceptable to—the intended audience.

For example, when shown the first illustration about oral rehydration salts (ORS) in Figure 25, 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 intended to promote using 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.

The first drafts of the materials for the initial rounds of pretesting should be the least complicated in such technical elements as graphics, color, sound, and moving images. As the content of the material is improved in subsequent rounds of pretesting, create drafts that resemble the final product as closely as possible in their color, size, layout, sound, special effects, and moving images. For instance, if you are testing a poster, it should be the same size as the final poster, with similar colors and background elements—houses, decorations, trees, building elements, or whatever will make up the context of the final product. The final round of pretesting should be done with drafts that are as similar as possible to the final product. Otherwise, participants' observations and opinions will not accurately reflect your final product.

During pretests, the interviewer must:

- Ask questions that are open-ended rather than closed-ended, and probing rather than leading.
- 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.
- Respondents may want to give the answers that will make you happy. Be careful not to lead them to the "correct" answer with your smile or attitude.

The staff, artists, and writers who have produced the materials should have a role in their pretests. Their exposure to audience reaction to their material can be very persuasive in demonstrating the value of pretesting.

Figure 25. **Drafts of an ORS Message**

Illustration A. The intended 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.

Illustration C. After further revisions. A mosque, clock, and lamp were added; the father prays, and the child appears ill. Viewers said that the clock was not a familiar symbol and was not understood.

Illustration D. The mosque in the window was replaced with 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.

Courtesy of the Sudan Community-Based Family Health Project

These four drafts 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, most pretest respondents recognized the picture's components and could synthesize the message. Including carefully selected time elements made the subsequent message—to throw out unused solution after 24 hours—much easier to understand.

D. Create a Pretest Discussion Guide

Before beginning either group or individual pretests, create a list of questions. The principles for developing pretest questions are similar to those outlined for developing a discussion guide. However, the pretest questions differ from those in an exploratory or concept development focus group, in that they focus solely on the material being pretested and primarily address the variables described at the beginning of this chapter—comprehension, attraction, acceptance, involvement, and call to action, if there is one.

Appendix 9 contains sample discussion questions for pretesting print materials; Appendix 10 contains sample discussion questions for pretesting radio and video. Use the questions in these Appendices as a starting point for developing your own pretest discussion guide.

E. Pretest With the Audience

Pretest your drafts with members of the intended audience. Apply the same participant selection criteria used to recruit interview and focus group participants.

Also, review the draft materials with "gatekeepers." These are intermediaries, such as program directors, secretaries, and health workers, who control the distribution channels for reaching your intended audience. If the gatekeepers do not like the material or do not believe it is credible or scientifically accurate, it may never reach the intended audience. Make sure the gatekeepers review the draft materials, since allowing them to do this may prevent them from blocking distribution. Keep in mind, too, that these reviews with gatekeepers are not a substitute for pretesting the materials with intended audience representatives or for obtaining technical clearances from medical experts.[35]

In-Depth: Effective Pretestng

In-Depth: Effective Pretesting

1. Pretesting Print Materials

Make sure the production team knows, with enough lead time, the date they must provide you with a draft for pretesting.

a. First Rounds of Pretesting for Print. For the first rounds of pretesting print materials for low-literates, it is appropriate to have line drawings of the illustrations with the accompanying simple text. Test the text and picture of each message separately to obtain specific pretest 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 with another blank sheet of paper, held in place with paper clips, while testing the picture alone. The page may then be unfolded, or the paper removed, so that the picture and text can be pretested together. (See Figure 26.) Give each individual message a number to refer to when pretesting: *1A* and *1B* could be alternative versions of the same message.

Figure 26. **Pretesting Illustrations and Text**

Courtesy of Peru-Mujer, Peru

For materials with more text, make sure the text is laid out in a logical sequence. However, the final expected graphic and formatting elements—like boxes, columns, and bullets—do not need to be included at this stage.

Number of Respondents. In early rounds of pretesting, improvements needed in the drawings should be readily evident. Usually, then, you will only need to interview 10 respondents before analyzing the results. In subsequent pretests, interview at least 20 respondents in each round before making revisions. In these final rounds of pretesting, materials may need minor changes, but comprehension and acceptability should already be high.

Number of Copies. To determine how many copies you will need for pretesting, follow these guidelines. If you are conducting:

- Individual interviews to test material intended for individual consumption, such as leaflets or brochures, you can use the same copy for each person.
- Group interviews to test these materials, make a photocopy for each person in your group.

If you are testing:

- Posters, flip charts, counseling cards, or any print material that is usually viewed in a group setting, one copy is enough.
- Lengthy, primarily textual materials, make a copy of the material for all participants and, preferably, deliver it to them before pretesting so they can read it first.

Remember to use your pretest discussion guide in individual and group pretests.

b. Individual Pretesting for Print. When conducting pretests, emphasize that you are testing the material, not the respondent. In individual pretesting, conduct the interview in a private place and discourage onlookers, as they may be distracting to the respondent.

Literate Audience. Individual pretesting can be highly effective for materials aimed at literate audiences. These materials contain mostly text and few graphics—for example, a physician training manual introducing a new vaccine and its delivery. In particular, in-depth interviews scheduled in advance can provide excellent feedback on textual materials with many pages, since the participant should have read the material before the interview.

Low-Literate Audience. Whenever possible, pretests of print materials for low-literate audiences should be conducted with only one person at a time to ensure that the respondent's answers are not influenced by other people. Individual interviews are also indicated if peer pressure from others is likely to sway respondent views, when the materials to be tested contain complex or highly sensitive subject matter, or if the respondents are geographically dispersed.

Low-Literate Materials Pretest Forms. PATH uses several forms to help you organize and gather data in individual pretesting for low-literate, primarily pictorial, print materials: the pretest background sheet (Appendix 11), the pretest data sheet (Appendix 12), and the pretest summary of results sheet (Appendix 13). These forms may be adapted to suit each project.

The forms help you keep track of two things:

- *Details.* Pretesting generates many details on how to improve the materials. If these details are not carefully organized and documented, they will be lost.
- *Pretest participant characteristics.* You'll need this information (1) for pretesting, to ensure that individuals who meet your screening criteria are the only ones included in pretesting; and (2) in your report, to summarize who participated in the pretests.

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.

Using the Pretest Background Sheet. Figure 27 shows how the pretest background sheet is used to record information about pretest respondents. Prepare one pretest background sheet for each round of pretesting. Just as the participant screening questionnaire was used for selecting in-depth interview and FGD participants in the exploratory phase of materials development, the pretest background sheet helps project staff select pretest respondents and record important information. List the selection criteria on the pretest background sheet in the spaces just above the bold line, and fill them in before pretesting.

Tactfully solicit personal information that some individuals may feel is sensitive. For example, after the interviewer approaches a potential respondent in an "intercept" interview 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 intended audience.

Record information about each respondent on the pretest background sheet before the interview is over. Use the same respondent number on this sheet as was used on the pretest data sheet for each individual.

Figure 27. **Sample Completed Pretest Background Sheet**

The respondent number will correspond with the one used on the pretest data sheet.

Interviewer(s): *SM and DD*

Pretest Round: *1*

Test the text using the language that will be used in the material.

Pretest Background Sheet

Topic: *Immunization*

Material: *Client Immunization Booklet*

Location: *Compound X*

Language: *English*

****All participants must have a child 2 years or younger****

Date	Resp#	Schooling			Sex		Age		*Child has been immunized*		*Heard about immunization before*	
		0	*1-3*	*4-6*	M	F			*Yes*	*No*	*Yes*	*No*
8 Aug	*1*	*X*			*X*					*X*		*X*
8 Aug	*2*		*X*			*X*			*X*		*X*	
8 Aug	*3*			*X*		*X*			*X*		*X*	
8 Aug	*4*	*X*			*X*				*X*		*X*	
8 Aug	*5*		*X*			*X*				*X*	*X*	
8 Aug	*6*		*X*			*X*				*X*		*X*
8 Aug	*7*			*X*	*X*				*X*		*X*	
8 Aug	*8*	*X*			*X*					*X*	*X*	
8 Aug	*9*			*X*	*X*				*X*		*X*	
8 Aug	*10*		*X*			*X*				*X*	*X*	
Total		# *3*	% *30*	# *4*	% *40*	# *3*	% *30*	# *5*	% *50*	# *5*	% *50*	#	%	#	%	# *5*	% *50*	# *5*	% *50*	# *8*	% *80*	# *2*	% *20*

Use these columns for other information as needed.

Using the Pretest Data Sheet. Use the pretest data sheet to record feedback from the respondents about the material that is being pretested. Figure 28 shows a completed pretest data sheet. Complete one sheet for each message, or page, during each round of pretests. Project staff should fill out information above the bold line before pretesting. The letters *A, B, C*, and so forth, in the "Describe Picture" box, correspond to major elements of the illustration. This shorthand system allows the note-taker to record responses quickly by simply listing the appropriate letters.

During and after pretests, the interviewer completes everything below the bold line on the pretest data sheet:

- First, each respondent is assigned a number. Record the number in the left column.
- Before you show the picture to the respondent, fold the text, if any, out of sight, or cover it, and ask questions about the picture.
- Next, unfold the page and ask about the text.
- In the column labeled, "What do the words mean to you?," circle the *R* if the respondent read the accompanying text; circle the *H* if the respondent heard the text read aloud by the interviewer.
- In the next two columns, record the respondent's feelings about the message and suggestions for improvements.

After the pretest team completes a round of pretests, 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:

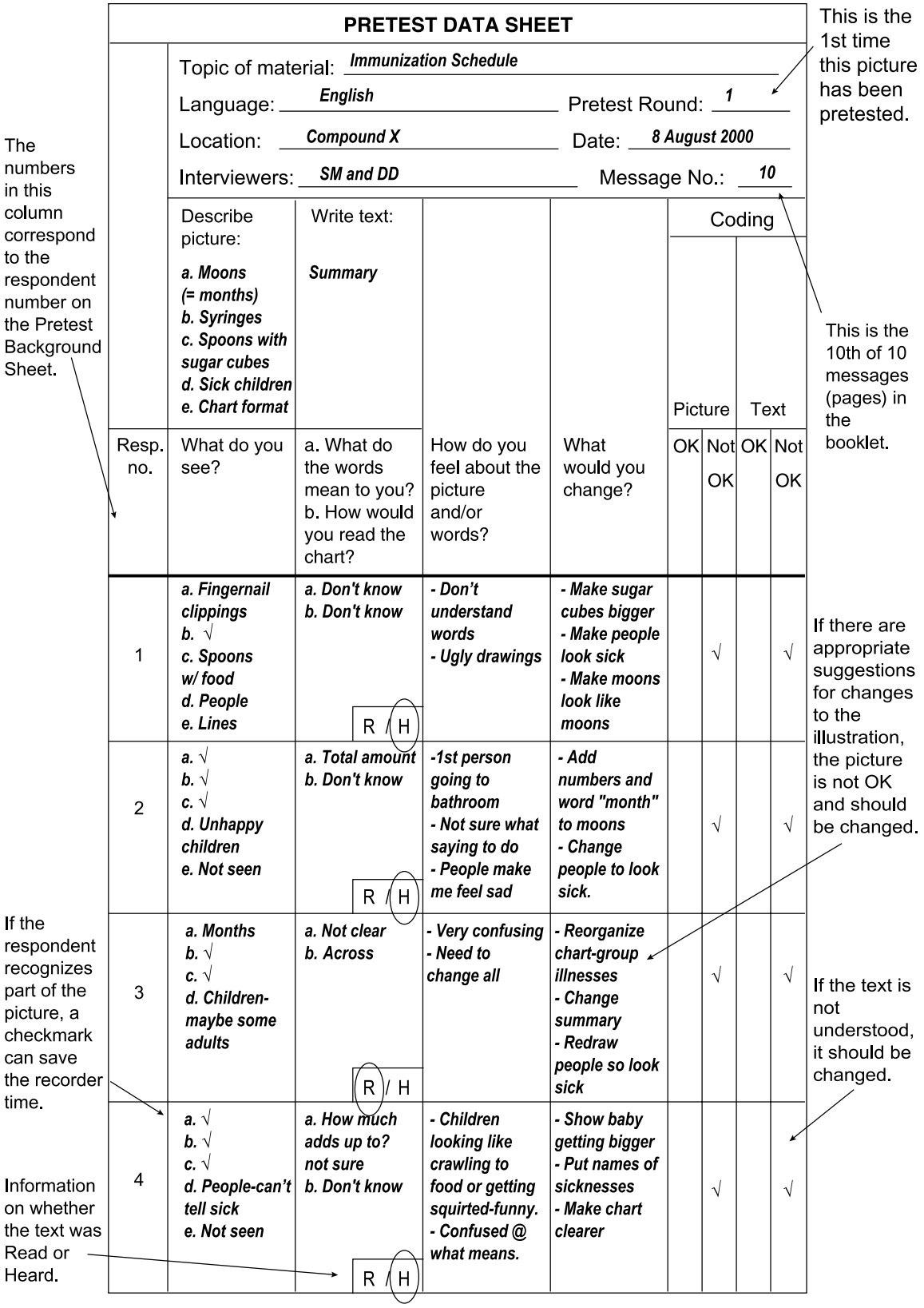
- *Comprehension*, from the "What do you see?" and "What do the words mean to you?" boxes.
- *Acceptability*, from the "How do you feel about the picture and/or words?" and "What would you change?" boxes.

Criteria for Comprehension

PATH uses two criteria to determine whether a message is communicated successfully:

- **Comprehension:** Does the respondent see what s/he is meant to see in the picture and understand the accompanying text?
- **Acceptability:** How does the respondent feel about the picture and text, and what changes does the respondent suggest for making the message more culturally appropriate?

Figure 28. **Sample Completed Pretest Data Sheet**



PRETEST DATA SHEET

Topic of material: *Immunization Schedule*

Language: *English* Pretest Round: *1*

Location: *Compound X* Date: *8 August 2000*

Interviewers: *SM and DD* Message No.: *10*

This is the 1st time this picture has been pretested.

This is the 10th of 10 messages (pages) in the booklet.

The numbers in this column correspond to the respondent number on the Pretest Background Sheet.

Describe picture:

a. Moons (= months)
b. Syringes
c. Spoons with sugar cubes
d. Sick children
e. Chart format

Write text:

Summary

Resp. no.	What do you see?	a. What do the words mean to you? b. How would you read the chart?	How do you feel about the picture and/or words?	What would you change?	Coding: Picture OK	Coding: Picture Not OK	Coding: Text OK	Coding: Text Not OK
1	*a. Fingernail clippings* *b. √* *c. Spoons w/ food* *d. People* *e. Lines*	*a. Don't know* *b. Don't know* R / H	*- Don't understand words* *- Ugly drawings*	*- Make sugar cubes bigger* *- Make people look sick* *- Make moons look like moons*		√		√
2	*a. √* *b. √* *c. √* *d. Unhappy children* *e. Not seen*	*a. Total amount* *b. Don't know* R / H	*-1st person going to bathroom* *- Not sure what saying to do* *- People make me feel sad*	*- Add numbers and word "month" to moons* *- Change people to look sick.*		√		√
3	*a. Months* *b. √* *c. √* *d. Children-maybe some adults*	*a. Not clear* *b. Across* R / H	*- Very confusing* *- Need to change all*	*- Reorganize chart-group illnesses* *- Change summary* *- Redraw people so look sick*		√		√
4	*a. √* *b. √* *c. √* *d. People-can't tell sick* *e. Not seen*	*a. How much adds up to? not sure* *b. Don't know* R / H	*- Children looking like crawling to food or getting squirted-funny.* *- Confused @ what means.*	*- Show baby getting bigger* *- Put names of sicknesses* *- Make chart clearer*		√		√

If there are appropriate suggestions for changes to the illustration, the picture is not OK and should be changed.

If the text is not understood, it should be changed.

If the respondent recognizes part of the picture, a checkmark can save the recorder time.

Information on whether the text was Read or Heard.

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 doesn't 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.

Project staff must determine what level of comprehension and acceptability constitutes an *OK* or *Not OK* message. With each picture and text coded either *OK* or *Not OK* based on the two criteria, the question then becomes, how many *OK*s does it take to have a successful message? Project staff should reach consensus on an answer before pretesting. PATH recommends that:

- At least 70 percent of the respondents should be able to correctly interpret the visuals alone.
- At least 90 percent should be able to interpret the visuals with the text and find them both acceptable.

Using the Pretest Summary of Results Sheet. The pretest summary of results sheet indicates what changes need to be made to the text and/or visuals to increase message comprehension and acceptability. As soon as a round of pretests ends, and the coding is completed, the coder transfers the results to the pretest summary of results sheet (Figure 29). Usually, data from all the messages pretested in one round can be recorded on one or two of these sheets.

Use two separate lines to record the results of the pictures, *P*, and text, *T*, for each message. For example, if several pages of a material are being pretested, label the first line *1P* and record the comments for the picture of message number one on that line. Label the second line *1T* and include the results for the text of message number one. Record the messages that follow as *2P, 2T, 3P, 3T*, and so forth. The coder should calculate the percentages of *OK* and *Not OK* pictures and text based on the total number of pretests—and summarize the suggested changes from the pretest data sheet in the right-hand column of the page.

Figure 29 shows the results of one of the last rounds of pretesting the immunization schedule shown in Figure 30. A graphic as complicated as this one needs first to be broken down into smaller pieces for individual pretesting. In this example, each illustration depicting an illness was tested separately. The moons were tested to make sure that they conveyed the concept of time passing. When each illustration was well understood and accepted, it was then incorporated into the immunization schedule and the graphic was tested as a whole. Here, it was important to test the viewers' understanding of the graphic layout to make sure they could read it. For example, did they understand that they should read from left to right between each line? This was determined by asking, "What is the last line of the illustration trying to tell you?" or "When should a child be immunized for whooping cough?" Figure 31 shows how the changes suggested by viewers were incorporated into the immunization chart to prepare it for the second round of pretests.

***Figure 29*. Sample Completed Pretest Summary of Results Sheet**

Coder (s): *Rani Kundah*

Pretest Round: *1*

Location: *Compound X*

Topic of Material: *Immunization Client Booklet*

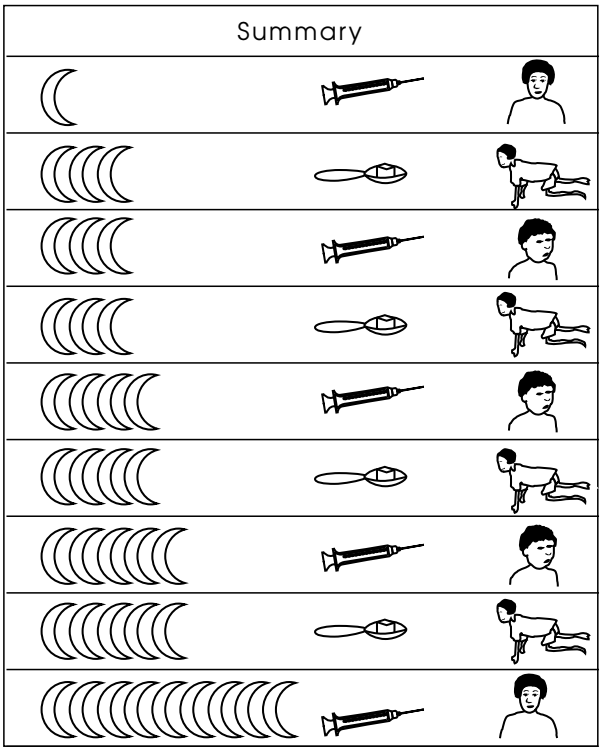
Pretest Summary of Results Sheet

Message Number	Total Interviewed	OK		Not OK		Suggested Changes
		No.	%	No.	%	
1P	*10*	*1*	*10%*	*9*	*90%*	***Change layout of chart; put numbers***
						and word "month" with moons; show
						baby getting bigger with moons; make
						people like children and make them
						look sick; put names of illnesses
1T	*10*	*0*	*0%*	*10*	*100%*	***Change title to "immunization schedule"***
2P						Continue summarizing pertinent
						suggestions from the forms used
2T						while pretesting. This summary is
						very useful when explaining
3P						proposed changes to the artist.
3T						

These will help you to judge which messages need the most work.

Incorporate these suggested changes into Pretest Round 2.

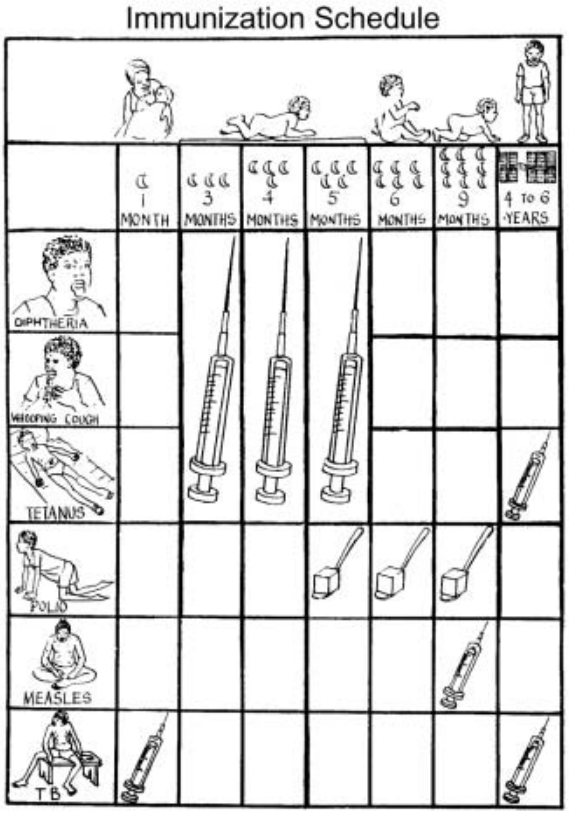
Figure 30. **Sample Illustration, Pretest Round One, "Summary"**



Each element of this picture first was tested separately.

Courtesy of the Ministry of Health and Sierra Leone Home Economics Association

Figure 31. **Sample Illustration, Pretest Round Two, "Immunization Schedule"**



Changing the layout of the graphic, improving the illustrations of the sick children and labeling them, numbering and labeling the moons, and adding a growing child greatly improved comprehension of the graphic presented in Figure 31.

Courtesy of the Ministry of Health and the Sierra Leone Home Economics Association

c. Group Pretesting Print Materials. Group pretesting is similar to focus group discussions in that the activity is conducted in a group, a facilitator leads the discussion using questions established beforehand in a discussion guide, and the facilitator manages the group dynamic. Group pretesting differs from concept development and exploratory-phase focus groups in that, rather than exploring a range of issues or subjects, the questions focus on the materials being tested.

Introduction. In the facilitator's opening statements, s/he explains that the group's suggestions will be used to improve the materials. For all materials, the pretester begins by asking some general questions to make sure that main points and concepts presented in the material are understood. Specific questions are then asked about the illustrations, text, sequencing, attractiveness, self-identification with the material, and other suggested changes.

Highly Graphic Materials. If the material is heavily pictorial, as in a poster, first present and discuss the illustration only. Then reveal the text, have a participant read it aloud, and discuss it. Discuss the relationship between the illustration and text and, except for one-page or single-message materials, discuss the sequencing of the messages and overall comprehension and acceptability of the material.

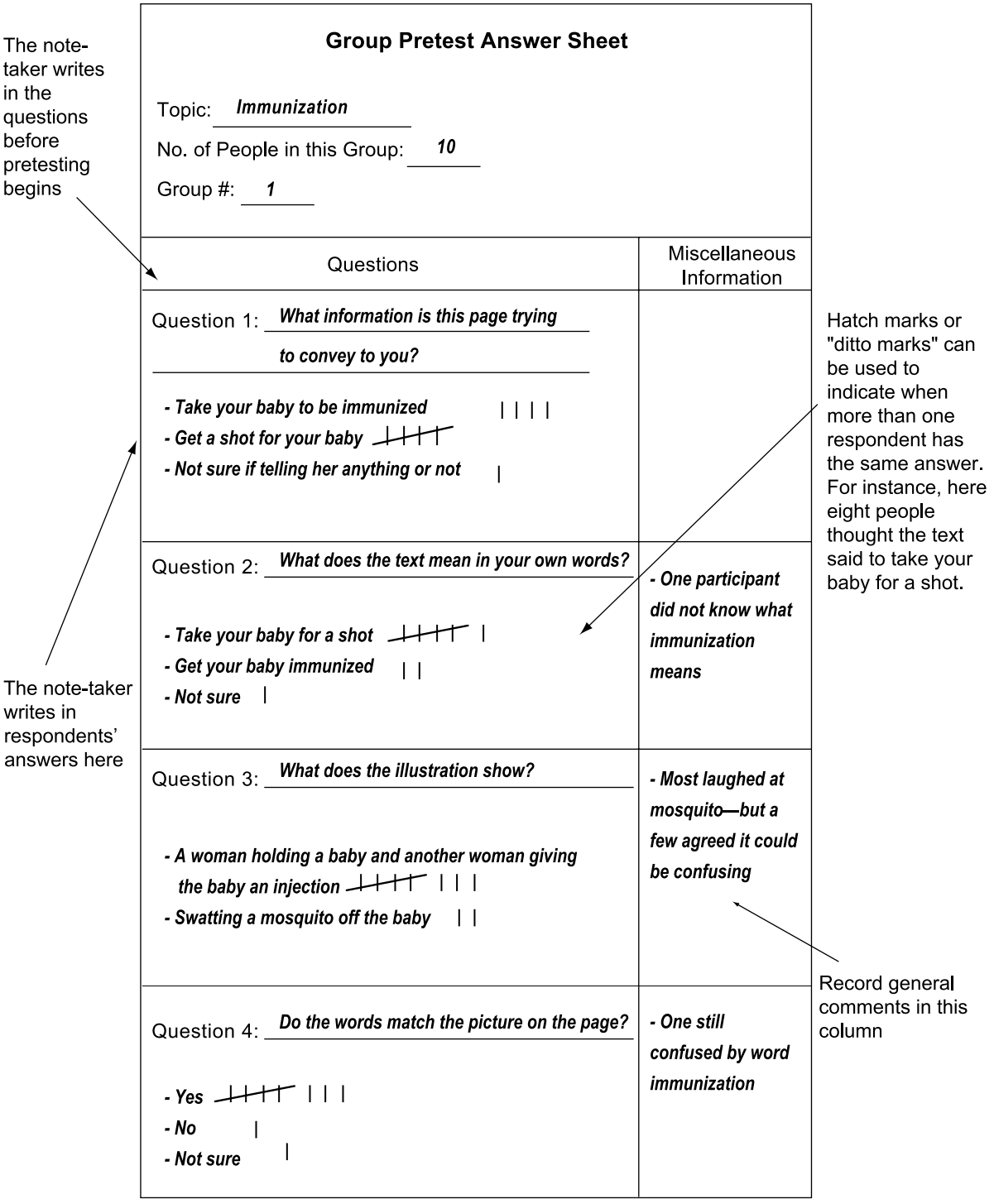
Mostly Textual Materials. Group pretesting is particularly effective and efficient for pretesting materials that are mostly textual, with few illustrations. Literate participants are often more self-assured and not as likely to be influenced by other members of the group when reviewing materials.

If the material is mostly textual, ask each group member to take a turn reading a section of the material aloud. Listen for words that the readers have difficulty reading or understanding. After one respondent reads a section—one page, for example—ask the whole group to discuss the section and make suggestions for improving it.

Using the Group Pretest Answer Sheet. In a group pretest, the facilitator leads the discussion, and the note-taker records the group's opinions and summarizes the answers. Some note-takers use a plain pad of paper for their notes. Others prefer to use a group pretest answer sheet (Figure 32 and Appendix 14). This sheet has the same questions as the discussion guide recorded on the left side of the page. It includes extra space so that the note-taker can write a summary of the answers to each question. The right-hand side of the page includes a column for comments that do not fit beneath the heading of each question.

To analyze the responses from a group pretest, you need an analysis form and simple math.

Figure 32. **Completed Print Material Group Pretest Answer Sheet**



Using the Group Pretest Analysis Form.[36] Figure 33 shows a sample partially completed print material group pretest analysis form for the first round of pretesting for question 3 in Figure 32. The question has three possible answers: understood/misunderstood/partially understood, which are written in the first column on the left. Note that when filling in an analysis form for your own pretesting, you'll need to choose possible responses that are appropriate for your material. For instance, possible answers might include *get immunized, do not get immunized, don't know.*

Figure 33. **Partially Completed Group Pretest Analysis Form**

Group #	1	2	3	4	Total	Percent
Question # *3:* ***What does the illustration show?***						
Response Categories:						
1. ***Understood***	***8***					
2. ***Misunderstood***	***2***					
3. ***Partially understood***	***0***					

To fill in the group pretest analysis form, follow these steps:

1) Use Column 1, since this pretest group is the first one. The answers from the second pretest group will go in column 2, the answers from the third pretest group will go in column 3, and so forth.

2) The 8, for the eight people who understood the picture correctly, is put into the row marked *understood.*

3) The 2, for the two people who misunderstood the picture completely, is put in the row marked *misunderstood.*

4) There were no people in this group who identified only part of the picture correctly, so we place a zero in the row marked *partially understood.*

5) Fill in the rest of the analysis form for question 3.

6) After you fill in the responses for question 3 from all the group pretests, add up each row and place that number in the total column. In the example, 35 people understood the picture correctly, 6 misunderstood the picture, and none partially understood the picture. In this example, there was a total of 41 people in all the group pretests.

7) To determine the percentages, simply take the total number of each row, such as 35 from the *understood* row, and divide each by the total number of participants—in this case, 41:

$35 \Rightarrow 41 = 0.85$

8) Then, multiply the answer by 100 to get the group percentage. Record this number in the percent column.

0.85 x 100 = 85

We now know that 85 percent of the participants understood the picture correctly.

Now we will determine the percentage of people who interpreted the picture incorrectly.

6 ⇒ 41 = 0.15, and 0.15 x 100 = 15

We know that 15 percent of the participants misunderstood the picture.

As shown below in Figure 34, fill in the group pretest analysis form for each question in the group pretest answer sheet. Then review the percentages.

- At least 70 percent of the respondents should be able to correctly answer questions about the visuals alone.
- At least 90 percent should find the visuals and text acceptable and be able to correctly answer questions about them.

Figure 34. **Fully Completed Group Pretest Analysis Form**

Group #	1	2	3	4	Total	Percent
Question # *3:*						
Response Categories:						
1. ***Understood***	***8***	***9***	***9***	***9***	***35***	***85%***
2. ***Misunderstood***	***2***	***3***	***1***	***0***	***6***	***15%***
3. ***Partially understood***	***0***	***0***	***0***	***0***	***0***	***0%***
Total	***10***	***12***	***10***	***9***	***41***	***100%***

Appendix 15 contains a sample group pretest analysis form you can adapt to suit your needs.

Pretesting radio and video materials follows the same general ideas described above, but some of the tools and processes are different.

2. Pretesting Radio Spots and Programs

For the first rounds of pretesting of your radio spot or program, it is sufficient to use an in-house production that includes the same elements as expected in the final version. If it includes music, use the same or very similar music. If several characters are in a dramatic format or in a straightforward information format, make sure the gender and age of the voices are the same. If it contains sound effects, use the closest possible sounds to those expected in the end product. This way, you can avoid payments to professional actors or announcers for a spot or program that will probably be modified after the pretest.[37]

Once the spot or program is close to being well understood and accepted, conduct the final rounds of pretesting with a rough cut using professional actors, music, and sound effects. Otherwise, participant observations and opinions will not reflect the final material.

Remember to use your pretest discussion guide in individual and group pretests for radio.

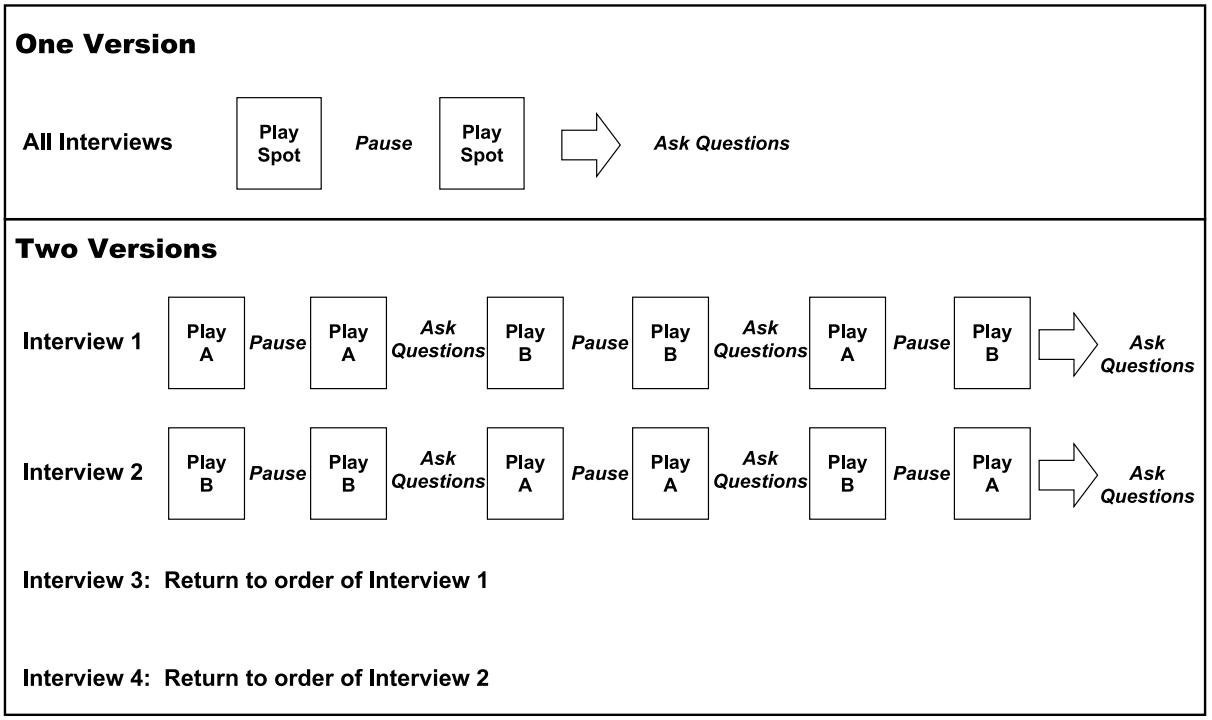
a. Individual Pretesting for Radio. Typically, individual pretesting is most appropriate for radio spots instead of programs, which, due to their length, are more efficiently pretested in groups.

If only one version of the spot is being pretested, record it two times in succession with a small pause between recordings. After your introductions and general questions to screen the participant, tell the person being interviewed that you are going to ask her or him to listen to a radio spot and to pay close attention. Play the first recording. After it has finished playing, let the tape continue to run and ask her or him to listen to it one more time. Then, turn off the tape player and ask the pretest questions as outlined in your discussion guide.

If there are two versions of the same spot or program, or two different radio spots, identify the cassette with the letters *A* and *B* to indicate two versions, or two different spots. Record version A twice with a small pause between each taping, followed by a long pause. Then record version B two times with a small pause between each taping, followed by another long pause. Finally, record the two versions, or two different radio spots, in A-B order, followed by a long pause.

After your introductions and general questions to screen the participant, tell the first interviewee that you are going to ask her or him to listen to a radio spot and to pay close attention. Play version A. After it has finished playing, let the tape continue to run and ask the participant to listen to it one more time. Then, turn off the tape and proceed to ask the pretest questions outlined in your discussion guide. Repeat the same process for version B. After asking the questions for the second version, tell the person you now want her or him to listen to the two announcements together and to compare them. Play the two versions and then ask the comparison questions. (See Figure 35.)

Figure 35. **Pretesting Pattern for One- and Two-Version Radio Spots**



For the second interview, record version B two times in succession with a small pause between each taping, followed by a long pause. Then record version A two times with a small pause between each taping, followed by a long pause. And finally, record both versions in B-A order. Test version B first, followed by version A, then play version B and version A so that the respondent can compare them. Reversing the order of pretesting each time helps eliminate any bias that pretesting always in the same order might create.

b. Group Pretesting for Radio. As recommended earlier, don't try to create radio programs unless you have the expertise. Instead, contract them out to professionals. However, you can and should pretest a radio script and draft program that have been written or produced by someone else. The best way to pretest a radio program is with groups.

First, determine whether the radio program will be:

- A one-time broadcast—that is, an individual broadcast and not part of a series of regularly scheduled radio programs;
- Part of a regularly broadcast series of pre-recorded programs on a number of different topics;

- Part of a short series of programs prepared on a single topic, which will later be used as a series for training and dissemination, for example, a series of four radio programs on how to protect your child from various illnesses through vaccinations; or
- A series of programs regularly broadcast live in the studio.

In the first two cases, the pretesting of each individual program should follow the steps below. For the second two cases, pretesting all of the radio programs in a series is costly. In addition, the task is practically impossible if the programs are broadcast daily, even if they are pre-recorded. What you should pretest here is not so much the comprehension of the message that a particular program transmits, but whether its format and structure are the most appropriate for transmitting an educational message in a comprehensible and convincing way.

- If the program deals with several different messages, encourage the participants to name as many messages as possible. Then note the order in which the messages or topics are mentioned. Note also those messages that are least remembered or those that are not remembered at all. For example, if the program deals with which illnesses a child might be protected from through vaccinations, the questions of comprehension might include:
  - "What did the program say are the illnesses that your child can be protected from through vaccinations?" Write down the illnesses in the order that they are given.
  - "What did the program say you should do to get your child protected?" Write down the responses in the order that they are given.
- If the program is a dramatization and uses characters, ask about the individual characters.
  - "Who are the characters you heard?"
  - "Who do you think (*mention each character*) is?"
  - If the character is a representation of an average individual from the intended population, ask, "Do you think that (*mention the name of the character*) is like people from here, and does she or he talk the way people from here talk?" If the answer is no, ask, "How is her or his speech different? How should s/he speak to become like, or sound like, people from here?"

Organize and conduct a group pretest much in the way you would organize a focus group discussion. The pretest should include these components:

- **Invitation.** When you invite people to the pretest, don't tell them exactly what the radio program is about. When inviting parents to listen to a rough-cut radio program on various illnesses that can be prevented through vaccination, for instance, say you are developing a program about caring for your children. See how participants react to the program, and let them tell you what it's about.

- **Introduction.** Introduce yourself as someone who has been asked to help improve the radio program. Tell participants that you have nothing to do with the production, so they will not feel that they're offending you by offering critical feedback. Explain the technical nature of a rough-cut. Let participants know that this is not a finished product, and that they can expect some sudden changes in volume and rough transitions.
- **First Program Play.** Play the rough-cut radio program once. Ask participants to hold their comments until after they hear the entire program, but try to note reactions such as boredom, confusion, enjoyment, agreement, and revelation.
- **Written Pretest Questionnaire.** To make sure that you capture the individual's comprehension and acceptance levels before the group discussion, give the participants a written questionnaire. Appendix 16 is a sample radio and video pretest questionnaire.

  If the audience is literate, the questionnaires can be self-administered, and you can individually help anyone who has questions. If you need to test with a non-literate audience, make sure you have enough staff to help administer the questionnaires individually.
- **Second Program Play and Group Session.** After the individual questionnaires are completed and collected, play the radio program again, and conduct the group session. If the program is long or has natural breaks, consider stopping after key sections, or ask the group to let you know when they would like the radio program stopped. If you had individual key scenes taped after the radio program was taped from beginning to end, stop after each section for discussion. Whenever you stop the tape, make sure to ask what sections participants liked or disliked, understood or didn't understand, and why. Remember to use your pretest discussion guide.

  Thank the participants for their cooperation, and close the session.

3. Pretesting Video Spots and Programs

a. Options for Video Pretesting. For video, you have several pretest format options. The option(s) that you select will vary, depending on your budget and the stage of pretesting, from beginning to final rounds.

- **Storyboard Plus Tape.** Have the artist make a storyboard of the main scenes of the video. Accompany the storyboard with an audio recording of the suggested text in the voices of the people appearing in the drawings, or just a voice-over for the corresponding drawings. Match a different voice to each character, using team members or others. The taping doesn't need to be a finished studio production. This economical way to prepare a draft of a video is ideal for the first round(s) of pretesting or for projects with limited budgets.

- **Storyboard Animation.** Producers videotape each drawing of the storyboard in such a way that it gives the impression of movement, making use of all the technical possibilities available: close-ups, zoom-outs, camera left or right pans, fade-ins or -outs, vertical pans, full shots of the squares, or super close-ups of fine details. These camera movements provide a sensation of movement. The videotape includes the sound track and voiceovers that replicate the proposed audio as closely as possible, including appropriate dialogue, music, and special effects. Use this slightly more expensive method for the first rounds of prestesting.
- **Rough Draft Using Amateur Actors.** For cost efficiency, have your contractor prepare a draft video using good amateur actors rather than professionals. The sound track should have music, sound effects, and dialogue that closely match the expected final sound track. Use this more expensive pretesting format in the final rounds of pretesting.
- **Rough Cut Using Professional Actors and Sound Track.** Use this format for the final rounds of pretesting. The editing transitions for the audio and visuals may still be choppy, and there may be extraneous lines or flickers. Explain these faults to the audience before they see the video so they won't fixate on the faults instead of on the content.

b. Group Pretesting Video Programs. Pretesting a video is best done in a group format because people need to come to where the TV monitor and VCR are located. When using a storyboard plus audiotape format, use the audiotape with every audience. Let the audiotape explain the storyboard. This ensures that the viewing is as objective as possible.

Organize and conduct a group pretest much in the way you would organize a focus group discussion. The pretest should include these components:

- **Invitation.** When you invite people to the pretest, do not tell them exactly what the video program is about. When inviting health care workers to view a rough-cut of a training video on maintaining sterile injection techniques, for instance, you can say you are developing a video on health care. See how participants react to the video, and let them tell you what it is about.
- **Introduction.** Introduce yourself as someone who has been asked to help improve the video program. Tell participants that you have nothing to do with the production, so they will not feel that they're offending you by offering critical feedback. Explain the technical nature of the format you are pretesting. Let participants know that this is not a finished product, and that they can expect scratches or lines on the picture, sudden changes in volume, or other imperfections.
- **First Program Play.** If the video is short, have it taped two times with a short interval between each taping. If the video is long, have the video taped once in its entirety, then have key scenes repeated with brief intervals between them. Play the rough-cut video, or show the storyboard and play the accompanying audiotape, once from beginning to end. Ask participants to hold their comments until after viewing the entire video, but try to note reactions such as boredom, confusion, enjoyment, agreement, and revelation.

- **Written Pretest Questionnaire.** To make sure that you capture the individual's comprehension and acceptance levels before the group discussion takes place, give participants a written questionnaire, such as the one found in Appendix 16, *Radio and Video Pretest Questionnaire*.

  Literate audiences can self-administer the questionnaires, and you can individually help anyone who has questions. If you need to pretest with a non-literate audience, make sure you have enough staff to help administer the questionnaires individually.

- **Second Program Play and Group Session.** After collecting the completed questionnaires, play the video again. If the video is very long or has natural breaks, consider stopping after key sections, or ask the group to let you know when they would like the video stopped. If you had individual key scenes taped, stop after each scene for discussion. Whenever you stop the tape, be sure to ask what sections participants liked or disliked, understood or didn't understand, and why. Remember to use your pretest discussion guide.

  Thank the participants for their cooperation and close the session.

4. Pretesting Computer-based Materials

Pretesting computer products is more complicated than pretesting other media because you must test to see whether the product works on different kinds of computer hardware, as well as how effective it is with users.

a. Testing the Hardware. Test your installation instructions and run the product on a variety of older and newer computers. Be sure to test all audio and video elements, as these can sometimes overwhelm older systems or systems with limited memory. If necessary, revise your product based on the results of your pretests.

b. Testing the Product. Before inviting anyone to be a pretest respondent, go through the product yourself many times. Test every link to make sure it does what it is supposed to do. Repeat this process every time you change anything, since a change in one place may affect other parts of the product in surprising ways.

- In general, it is better to pretest computer products with individuals, not groups.
- Conduct some of your pretests on the slowest, oldest computer that you think your users might have. It is important to know if users become frustrated with your product on older machines.
- Use of the material should be self-explanatory. If users cannot figure out what they are supposed to do without your help, you have not created a good product.

- Sit next to pretest respondents as they use the product on a computer. Notice what they do and whether they seem confused or frustrated. Take notes, but resist the urge to guide them. Instead, ask questions like "What do you think you should do next?" or "What are you wondering about?" or "What do you think will happen if you click there?" The answers will help you improve the product.
- If you are creating a Web-based product, test it on a slow Web connection. Nothing will frustrate users more than a product that is slow to download.
- For interactive products, test and retest the algorithms to make sure you have them right.

5. Gaining Final Approval

Once the individual messages have reached the desired level of understanding, the entire material should be approved by the organization(s) collaborating on the project, other institutions interested in using the material, and anyone else with the authority to do it. Make sure that those who are giving final approval to the material understand that it has been designed to reflect the needs and desires of the intended audience. If the authority giving approval to the materials suggests changes be made before printing or taping, help them understand that any additional changes will need to be tested.

Step 6. Produce Materials

Step 6. Produce Materials

Now that your audience and gatekeepers are satisfied with the materials, you are ready for final production. This may involve working with a printer, radio/video producer, webmaster, or other production specialist. Mishaps during this phase can jeopardize the results of your hard work. Spend time working closely with those involved in final production to ensure that they understand how you want the final product to look, feel, and sound, what you are willing to pay for it, and when you want the job completed.

A. Print Materials

The type of material (poster, flip chart, brochure), format (size, colors, style), paper, and finish (glossy, saddle stitch, scoring) all impact the printing cost. Take these factors into consideration as you design the materials, and start getting cost estimates as soon as you have a good idea what the final materials will be. Request cost estimates, references, and samples of work from at least three printers. Clarify any language on the estimates so that you are sure you are comparing costs for the same items between printers.

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

Getting Estimates

The printer needs to know:

- The size of the material
- The number of pages in the material
- The type of paper to be used for the pages and 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
- Delivery date

Other considerations:

Software. If you plan to provide the printer a disk from which to print the document, meet with her/him to discuss software before inputting the document. The printer must have software that is compatible with yours and that will allow her or him not only to see the document on the computer screen, but also to print the document.

Layout. Also speak with the typesetter before inputting the document because you need the specifications for the presses that will be used. The size of the press determines the parameters (such as margins and gripper space) for each page. You must include these parameters from the beginning of your document.

Economies of Scale. Often, the more copies you print, the lower the "unit price" (price per 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). In some instances, you may wish to print small quantities of the material initially, so that changes can be made if necessary. Weigh this option against the lower unit cost of printing a larger quantity.

Multiples of Four. Sometimes, booklets with a total number of pages that is a multiple of four can avoid wasted paper and higher costs. Also, printing on both sides is usually less expensive than printing on one side (but make sure the ink won't bleed through the paper).

Size Matters. Ask for advice about page sizes, and choose the most cost-effective size based on the sizes regularly used by the printer. Also, consider how the user will carry the material. Should it fit into the doctor's lab coat pocket for easy reference?

Paper Type. There are different types of paper (for example, bond, cover, colored, and book), and every type of paper is measured by weight. Heavier weight means thicker paper. Ask to see samples, and compare their look, feel, and cost. Consider using heavy book paper (70 pound) for covers instead of cover paper; it can be less expensive and saves on bindery costs.

Binding and Scoring. These heavily impact printing cost. Scoring is the process of folding the heavier weight cover paper so that it will lie flat when the document is closed (rather than popping up). Binding choices may include saddle stitch, spiral, GBC, velo, tape, and others. Ask printers for samples (and the cost) of the bindings they can use.

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

Proofs. Request a "blue line" before printing. This is an exact duplicate of what your document will look like once printed, but it is produced on yellow paper with blue ink. It shows the text, graphics, screens, color separations, and other elements. The blue line allows you to check for errors prior to beginning the printing process. Typically, printers do not charge for blue lines, but they do charge for correcting errors they didn't make.

Color. Multiple colors increase printing costs. Always count black as one color.

Illustration Size. Unless the drawings are the same size as they will appear in the pamphlet, the printer must reduce them, requiring either separate camera shots or photostats ("stats"). Stats are cheaper than separate camera shots, but both add to the cost.

Avoid Printing Photos Across Folds. Printing photos across folds usually is not visually effective and it is technologically very difficult to do successfully. Making sure the two sides match requires more work, which adds expense.

Bleeds. Extending color to the sides of the page or into the fold of a pamphlet (full or partial bleed) costs more than leaving white space at the edges. Similarly, white type against a colored or half-toned background also costs more than black type. (Black text on a light or white background is also easier to read.)

Negatives or Computer Files. Retrieve negatives or computer files from the printer as soon as print jobs are completed. Store negatives in a cool, dark, safe place in case the materials need to be reprinted at a later date.

Camera-Ready Artwork. Keep this accessible to staff so that necessary changes can easily be made before the materials are reprinted.

B. Radio, Video, and Computer-Based Materials

Be sure to try out an early copy of the final material before large quantities are reproduced. Listen to the tape; watch the video; work with the CD-ROM on your computer; navigate the Web page before it becomes available to the public. Sometimes, problems wait until reproduction to occur, and you want to find out before it is too late.

Final production of radio, video, and computer-based materials (except Web-based materials) includes labeling and packaging. These can be as basic or complex visually as is appropriate for your project. Many production companies handle this entire process. If your production company cannot do the type of labeling and packaging that you want, you may need to work with a separate graphic artist and printer. In either case, review the final product before it is printed and after a few copies have been run.

Tips for final production of radio and video materials have been incorporated into Appendices 6 and 8. Tips for final production of computer-based materials are included in Step 4.

Step 7. Distribute Materials and Train in Their Use

Step 7. Distribute Materials and Train in Their Use

Once materials are developed, tested, and produced, the next step is delivering them to the staff who will use them—and then training these people in their use. The objective of materials development cannot be met without 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 Step 8, *Evaluate Materials.*

A. Distribution Plans

A distribution plan is a detailed explanation of where your materials must go in order to arrive in the hands, radios, computers, or television sets of your intended audience. Although distribution can be relatively simple, it takes organization and planning to ensure its proper execution.

1. Organize Distribution Chains. Frequently, materials are sent from a central location to field offices or clinics that are responsible for distributing the materials further. Field offices and clinics, in turn, send the materials to villages, schools, churches, and marketplaces. Individuals at these organizations then give the materials to mothers and fathers. This is called a distribution chain. While efficient, this method gives you less control over how and when the materials get to your intended audience. Therefore, it is critical that you communicate clearly with people at each link of the chain and give them instructions and support so they can do their jobs. This means providing funding for mailing or photocopying, providing training, and sometimes, offering incentives to people who successfully distribute all their material. You and others in the chain can use a Monthly Record Form (Appendix 17) to track distribution.

2. Distribute by Hand, When Possible. Many materials can and should be delivered by hand. For example, health workers can hand pamphlets and fliers directly to their patients. This is an excellent method of distribution because the recipient can ask questions about the material, and the distributor can provide additional information while the subject is still relevant. Hand-delivery also ensures that the material arrives safely and to the right individual. Setting materials out on a table is one of the least effective methods of distribution, unless you can make it clear to the audience that these materials are meant for them.

3. Look for Strategic Distribution Opportunities. You can save time and money by distributing materials at an event or through distribution channels that target members of your audience. Look for Web sites, publications, or radio and television programs that already focus on your audience. Then find out if your materials can be distributed along these same channels. Also look for events (such as health conferences, sporting events, or town meetings) that attract members of your intended audience.

4. Remove Barriers to Distribution. Make it as easy as possible for audience members to receive your materials. Get materials into villages and areas where people actually live and work. The closer the materials are to the intended audience, the more likely the audience will see them. Avoid distribution methods that require your audience to pay postage fees or to travel long distances.

When distributing video and radio materials, make sure they are provided in a format your audience can use. Include your contact information so your audience can order additional copies or ask technical questions about the material.

5. Stretch Limited Quantities. If you are unable to produce sufficient quantities of your materials, find ways to stretch the limited number beyond initial distribution. Design print materials in black and white so they photocopy well. Place materials on the Web (even video and audio programs). Allow organizations to borrow materials, photocopy them, and send them back to you.

B. Training and Education

The training process need not be elaborate, 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, and more efficient. As with almost anything new, unless people understand the advantages, the materials will not be used properly, or they may not be used at all. Figure 36 provides tips for using print materials effectively.

1. Inform People Along the Distribution Chain. Everyone along your distribution chain needs to know why you developed the materials, for whom they are intended, and how they should be delivered. You can educate them by telephone, letter, or training them in person.

2. Train Staff. If your materials are teaching aides (for example, flip charts, manuals, or training videos), let your staff become familiar with the materials, and give them an opportunity to practice using them. Staff who are unfamiliar with videos and audio tapes, in particular, should get plenty of practice before using them with clients. Train them in how use the video player, how to connect the monitor to the television, how to introduce the video, and how to lead a discussion about the topic of the material.

a. **Develop a User's Guide.** Create a user's guide that will accompany the material and explain how to use it with the audience. Depending on the type of program, the user's guide can make suggestions such as how to screen a video in waiting rooms or how to use tapes during a training workshop.

b. **Create a Discussion Guide.** If you expect trainers to lead a discussion around a material you developed, create a discussion guide for the trainer that outlines key points for discussion. Include suggestions for facilitating the discussion.

Figure 36. **Tips for Using Print Materials Effectively**

Flip Charts

- When using a flip chart, always stand facing the audience.
- 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 as you explain it.
- Involve the group. Ask them questions about the pictures.
- Use text, if any, as a guide, but don´t depend on it. Memorize the main points and, as you show the picture, explain them in your own words.

Posters

- Display the posters in places of high visibility such as churches, banks, kiosks, and gasoline 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.

Booklets and Brochures for Low-Literate Audiences

- Explain each page of the material to the client. That way, the client can observe the pictures and listen to the messages at the same time.
- 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 health practice discussed.
- Give materials to your clients and suggest that they share the materials with others, even if they decide against the health practice discussed.

C. Getting Radio and Video Programs On-Air[38]

Radio and video can be effective and powerful media for delivering messages to large and broad audiences. Both media require the expertise of outside consultants, expensive equipment, and a significant investment of time—so do whatever you can to make sure your final programs are used properly.

1. Determine the Best Broadcast Time. Carefully study your audience to determine when they are most likely to listen to the radio or watch television so that your spot/program can be played during that time. Advertising agencies and radio and television stations often track this type of data and might be willing to share it with you.

a. **Low-Cost or Free Airtime.** Many broadcasters can transmit spots/programs either for free or at discounted rates for health programs. Ask your local stations if this is possible. In some countries, free airtime is mandated for Ministry of Health transmissions (but it is

often scheduled during hours where few individuals are listening, such as the middle of the night).

b. **Advertising Airtime.** If your program can afford to pay typical advertising rates, it is often worth it to ensure that your spot is shown when it is most likely to be watched.

2. Get Clearance. Some radio and television stations are rigidly bureaucratic, whereas others are more flexible. Obtaining permission from station managers to air a spot/program can be time consuming, so factor that into your timeline. In fact, if you hope to get airtime for anything longer than a 60-second spot, start talking to program managers before you start developing the material. That way, they can give you an idea of what they are more willing to broadcast, and you can get them to buy into your idea as it's being born.

3. Recruit Celebrities and VIPs. Getting celebrities or VIPs to contribute their voices or faces to your spot or program can add glamour and often create free publicity through other media channels such as newspapers. So take pictures! Often, busy celebrities and VIPs are willing to donate their time.

4. Develop Short Spots to Support Longer Programs. If possible, develop short spots to support your longer scheduled program. Some stations will incorporate short spots—10 or 15 seconds—in their schedule throughout the day. Longer spots must be more formally scheduled.

5. Deliver Tapes on Time and in the Appropriate Format. Find out when broadcasters need your tape(s) and honor these deadlines. Also ask for clarification about the format and type of tape each station will need. Keep this information organized so you do not miss a deadline by delivering the wrong tape to a station.

6. Coordinate With Related Campaigns. Find out what related campaigns your audience may see and hear during your campaign. Coordinate with these other campaigns so you can avoid conflicting and confusing messages.

7. Organize Listening or Viewing Groups. If appropriate, invite members of the intended audience to gather and listen to or watch the program and have a discussion afterwards. Train appropriate personnel to recruit individuals and lead the discussions. It may be necessary to create print materials (discussion guides) for the discussion leader that outline the key points for discussion and include hints on how to lead the group. (This is also a good way to evaluate your material once it has been distributed.)

8. Extend Your Audience. Give tapes of your broadcast spots/programs to local health centers, schools, community centers, and interested companies for use in their waiting rooms and outreach activities. After you have distributed your video through your primary channels (for example, the Ministry of Health, local clinics or hospitals, nongovernmental organizations providing health care services), consider more obscure distribution channels in your community. For instance, there may be a training program for medical assistants at a local university that could screen the video during a class. These future health care workers could then be exposed to your message early on in their career.

Step 8. Evaluate Materials

Step 8. Evaluate Materials

A thorough evaluation will help you determine whether your materials got to the right people and how your materials made a difference. Although evaluation can be a bit intimidating, it can also be affirming and exciting. It reveals strengths and weaknesses in your materials, and it gives you good, constructive feedback on your messages, your audience, the media you selected, and your pretesting techniques. It can also prove to managers that their money was well spent.

A. Evaluation Methods

Materials can be evaluated in many ways. Some methods will help you measure how well the materials were distributed, and some measure comprehension and acceptability. Following are several evaluation methods you can use alone or in combination with each other before coming to conclusions about your materials development program.

1. Interview Audience Members. Going back to your original audience screening questionnaires, you can seek out members of your audience and interview them about the materials, the messages, and whether the materials got to the right people. Depending on the topic, type, and purpose of the material, it might also be useful to interview people outside your main audience. For example, you might want to know how the general public perceived your radio campaign introducing a newly available vaccine.

- **Conduct intercept interviews** with clients or potential clients outside the clinic setting to find out whether they saw the material. Ask if they can recall what it said and whether it made them change their behavior.
- **Hold group discussions** to obtain feedback on materials from audience members, from trainers, and from other people along the distribution chain. You can use Appendices 9 and 10—examples of questions to be used when pretesting print, radio, and video materials— for evaluation.
- **Conduct a telephone or written survey** to evaluate an intervention. Pre- and post-surveys measure the impact an intervention has had on an individual's knowledge, attitudes, and practices.
- **Arrange listening and viewing panels** for community leaders to report on their own and others' reactions to radio and video programs.
- **Ask policymakers** if the material answered their questions or helped strengthen their positions.

Appendix 18 includes a sample evaluation form you can adapt for whatever type of material you are producing.

2. Monitor Distribution Channels. Evaluate the effectiveness of your distribution chain by following up with the people who were responsible for handling and distributing your material. If there is a flaw in the distribution chain, you can find it through relatively simple discussions with the right people.

- **Follow up with people along the distribution chain.** Try to connect with staff along the distribution chain. Find out how many materials were received and distributed, to whom, during which dates, and to which audience members.
- **Ask people trained to use the materials** what they found useful about them. Ask whether they found anything particularly difficult to explain. Find out if they got any feedback about the materials.

3. Observe How Materials are Distributed and Used. Direct observation can be an excellent method of evaluation. Most people present an optimistic view of the world when interviewed, and are unwilling to admit that their behavior did not change or that they forgot to do something prescribed in your materials. Through observation, you can see first-hand how materials are used and perceived.

- **Observe staff members** who are responsible for training or distribution. Make sure they understand how to present the materials. Find out how many copies they distribute in an average day, and to whom. Check to see if boxes of print materials are still in a cabinet, unopened, or if they are in easy reach of people who need them.
- **Pose, or have someone pose, as a client.** Observe whether a material is offered to you and others in the area. Ask questions about the material, and take note of how well staff can answer your questions.
- **Observe your intended audience** practicing a new behavior promoted in the materials such as taking a child to a clinic for an immunization, mixing oral rehydration solution, or preparing infant weaning food.

4. Monitor Audience Responses. A small, but helpful portion of your audience will take the time to complete and send back a response form. Some media lend themselves to audience feedback more easily than others. For example, many radio listeners will call in with feedback or questions that could prove valuable in your evaluation. Internet-based materials also lend themselves well to feedback.

- **Include something in the material that requires a response** you can measure. For example, include a coupon for a free item, such as a toy, a bag of rice, or a basket, and collect the redeemed coupons to find out how many people received your materials. Or ask your audience to complete a feedback form that evaluates your messages.
- **Read listeners' and viewers' letters** as a less formal but useful and inexpensive source of feedback from literate audiences. Be sure to ask radio stations and news outlets to send audience responses to you so you can include their feedback in your evaluation.

B. The Written Evaluation

When using any of these techniques, except direct observation, solicit suggestions for improving the messages. Collect these suggestions and write them out in an organized report that you can quickly access the next time you develop materials. If appropriate, you may organize the information as it pertains to each step in the materials development process. You may find that certain areas are particularly weak or strong. After a full evaluation, you will better understand how well the materials are understood, accepted, used, and distributed, and whether the materials justify their cost.

An Afterword

We hope you will find this "cookbook" useful as you develop materials for your program. We have tried to include many of the tips and techniques that we have found make the job easier and more rewarding. Try them, and let us know what works for you and what doesn't. A feedback form has been included at the end to make this easier for you.

Our take-away message: ongoing interaction with members of your intended audience can greatly improve your materials. Listen to them, and take their advice.

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Glossary of Acronyms

AIDSCAP	AIDS Control and Prevention Project
BCC	Behavior change communication
BD	Becton-Dickinson & Co.
CM	Computer-based media
CVP	Children's Vaccine Program
EPI	Expanded Program on Immunization
FGD	Focus group discussion
GAVI	Global Alliance for Vaccines and Immunization
IDI	In-depth interview
IEC	Information, education, and communication
IUD	Intrauterine device
KAP	Knowledge, attitude(s), and practice(s)
ORS	Oral rehydration salts/oral rehydration solution
PATH	Program for Appropriate Technology in Health
PIACT	Program for the Introduction and Adaptation of Contraceptive Technology
PSA	Public service announcement
SMOG	Simple Measure of Gobbledegook
TBA	Traditional birth attendants
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Resources

These organizations may have additional information on materials development for a variety of audiences.

Academy for Educational Development
1875 Connecticut Avenue, NW, Suite 900
Washington, DC 20009-1202
Tel: (202) 884-8000, Fax: (202) 884-8408, E-mail: admindc@aed.org, Web: www.aed.org

Association for Children and Adults with Learning Disabilities
4900 Girard Road
Pittsburgh, PA 15227 USA
Tel: (412) 881-2253, Fax: (412) 881-2263

Center for Communication Programs
Population Communications Services
The Johns Hopkins University
111 Market Place, Suite 310
Baltimore, MD 21202-4024 USA
Tel: (410) 659-6300, Fax: (410) 659-6266, Web: www.jhuccp.org

Centre for International Child Health
Institute of Child Health
30 Guilford Street
London, WC1N 1EH, United Kingdom
Tel: +44 020 7905-2122, Fax: +44 020 7404-2062, Resource Centre: +44 020 7829 8689,
Web: www.cich.ich.ucl.ac.uk

Maternal/Child Health Institute
American Public Health Association
800 I Street, NW
Washington, DC 20001
Tel: 1 (202) 777-2742 (APHA), TTY (202) 777-2500, Fax (202) 777-2534
E-mail: comments@apha.org. Web: www.apha.org

National Clearinghouse for Alcohol and Drug Information
P.O. Box 2345
Rockville, MD 20847-2345 USA
Tel: (301) 468-2600, Toll-free (800) 729-6686, Fax: (301) 468-6433, En español: 1-877-767-8432
TDD: 1-800-487-4889, E-mail: info@health.org, Web: www.health.org

National Maternal and Child Health Clearinghouse
Circle Solutions
2070 Chain Bridge Road, Suite 450
Vienna, VA 22182-2536 USA
Tel: (703) 821-8955, Fax: (703) 821-2098, Toll-Free: (888) 434-4MCH, Web: www.nmchc.org

PATH (Program for Appropriate Technology in Health)
1800 K Street, N.W., Suite 800
Washington, DC 20006
Tel: 202-822-0033, Fax: 202-457-1466, Web: www.path.org

Teaching Aids at Low Cost (TALC)
P.O. Box 49
St. Albans Herts
AL I 5TX United Kingdom
Tel: +44 (0) 1727 853869, Fax: +44 (0) 1727 846852, Email: info@talcuk.org, Web: www.talcuk.org

U.S. Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, DC 20201
Tel: (202) 619-0257, Toll Free: 1-877-696-6775, E-mail: hhsmail@os.dhhs.gov,
Web: www.dhhs.gov

Internet Resources

www.info.usaid.gov/pubs/usaid_eval/(U.S. Agency for International Development)

www.gao.gov (U.S. General Accounting Office – GAO)

www.ag.arizona.edu/fcr/fs/cyfar/evaldata.htm ("Alternative Methods for Collecting Evaluation Data," University of Arizona)

www.aacc.cc.md.us/soc/soc285/focusgroups.htm ("OnLine Anthology: Focus Groups," Anne Arundel Community College, Arnold, Maryland)

www.itracks.com/ (Interactive Tracking Systems—On-line software for conducting market research, focus groups, and surveys)

www.qrca.org/ (Qualitative Research Consultants Association)

www.streamlinesurveys.com (surveys and focus group resources)

www.path.org (Program for Appropriate Technology in Health)

www.childrensvaccines.org (Gates Children's Vaccine Program at PATH)

Where to Learn about Computer Software on the Web

Nothing changes faster in this world than software. Some of the products listed here may no longer be popular when you read this manual. However, here are Web addresses for learning more about some of our favorite tools these days:

Image Processing	
JASC Paint Shop Pro (inexpensive, but powerful)	www.jasc.com
Adobe PhotoShop® (expensive, but the best!)	www.adobe.com
Adobe Illustrator® (for creating drawings)	www.adobe.com
Microsoft PhotoDraw®	www.microsoft.com
Audio Processing	
Cool Edit 2000 (inexpensive, but powerful)	www.syntrillium.com
Video Processing	
Adobe Premier®	www.adobe.com
Creating Multimedia CM	
Adobe Acrobat®	www.adobe.com
Microsoft PowerPoint®	www.microsoft.com
GPhotoShow (free software for making screensavers)	www.bottin.com
Creating Interactive CM	
Toolbook II (Assistant or Instructor)	home.click2learn.com
Macromedia Dreamweaver, Director, or Flash	macromedia.com

List of Appendices

Appendix 1

Topic Guide for Focus Group Discussion With Injection Consumers

Rapid Assessment of Public Perceptions of Injections and Private-Sector Injection Practices in Central Nepal

A. Introduction and Warm-up

Spend five to ten minutes in warming up the group. Put them at ease.

1. Moderator's Opening

Describe what a focus group is—an opportunity to get together and discuss your thoughts and feelings about a particular topic.

- Explain the purpose of the group: We will be discussing some aspects of health and would like your reactions.
- Explain that they should feel free to give their frank opinions.
- Assure the group that this session is for research purposes only. All comments will be kept confidential and will be used only for research.
- Explain that it is an opportunity to share ideas. It is not a test, so there are no right or wrong answers. All comments, both positive and negative, are valuable.
- Create trust and security among the participants: We are like brothers and sisters.

2. Warm-up Questions

Introduce the team—the moderator and recorder—and provide warm-up information. Ask the participants to introduce themselves. Collect basic demographic and other information on them such as name, age, sex, caste, education, and occupation.

B. Common Health Problems and Treatment Practices

1. What kinds of health problems are most common in this community?
2. What treatments are given for these problems? *Probe for injections, oral, and other therapies.*
3. Where do people in this community go for treatment of these health problems? *Probe for all types of providers such as health posts, hospitals, private clinics, pharmacies, baidyas, and faith healers.*
4. How and why do you choose specific treatment providers?

C. Knowledge, Attitude, and Practices about Injection

1. How do you determine if a treatment is effective?
2. Are there any specific diseases or symptoms for which injections are most effective? *If yes*, which ones? What tells you that?
3. Where can people in this area get injections? If other than a government health post or hospital, why do they choose to go to that place?
4. When was the last time you or your family members got an injection? What was it for? Who gave it? Where? Why did you get the injection there instead of someplace else? Are there any other places nearby to get injections?

5. In your opinion, when people seek health care, how often do they receive injections: always, most of the time, or only sometimes? What are some of the reasons for this?
6. What do you think of receiving an injection? *Probe for its reason: good, bad, or problem.* What makes you feel that way?
7. Are injections popular in the area? Why? How did you form that opinion? *Probe for health education providers, source of health education, experience.*
8. How do the direct costs—the provider fee, for instance, and the indirect costs—such as cost of travel to the provider, of injections compare to the cost of other types of therapy?
9. If injections are more expensive, do people still demand or prefer them? *Probe for why people prefer injections; for instance, perceptions of injections being a quicker cure and, therefore, worth more money and effort.*
10. How do you think injection prescribers decide on whether or not to give an injection? *Probe for people´s perception of the providers´ therapeutic rationale.*
11. In what situations do patients request injections? *Probe for reasons*.
12. In what situations should patients not get injections? *Probe for reasons and how they know about them.*

D. Problems and Solutions

1. What types of risks are associated with injections or circumstances where injections should not be given?
2. Have you ever heard of people in the area having health problems resulting from injections*? If yes*, what kinds of problems? What could be done to prevent these problems?
3. How often do people in this area receive too many or unnecessary injections? What makes you feel they are unnecessary? In what situations are such injections received or provided?
4. In your opinion, what types of injections are unsafe? Can you talk more about that?
5. How often do people in this area receive unsafe injections? Why do you think they are unsafe? In what situations are such injections received or provided?
6. What could be done to prevent these problems of unsafe and unnecessary injections? How?
7. Aside from immunizations, are there differences in men, women, and children receiving injections? *Probe for differences in prescribing patterns and perceived gender- or age-based reactions to injections.*
8. Do you, or other people, ever keep your own, personal injection equipment for use in health facilities or at home? *If yes*, why do you have your own equipment? Where did you obtain it? How do you clean it after use?
9. Who provides injections at home, if required? *Ask if participants provide injections at home*. Can you show how you give the injection and how you clean the equipment?
10. What happens to syringes and needles after they have been used and discarded? *Probe for disposal process.*
11. What types of problems could occur due to the used and discarded syringes and needles? *Probe for problems and examples.*
12. What could be done to prevent these problems? *Probe for what should be done, who should do it, and why it was not done.*

E. Closure

1. Review any patterns or themes that emerged during the group.
2. Do you have anything else you want to tell me or add to the discussion?
3. Thank the participants for their time and assure them that their observations and comments have been very useful.
4. Provide incentives or serve refreshments, if appropriate.

Appendix 2

Participant Screening Questionnaire

Date _____ Place _____

Introduction:

Questions: ___ Invite ___ Do not invite

1.

2.

3.

4.

5.

6.

Thank you.

Notes:

Subgroup discussion invited to: _____ (date, time, place)

Name of screener/recruiter: _____

Participant´s name and how to contact: _____ (if invited)

Appendix 3

SMOG Readability Formula

Note: Some dictionaries in word processing programs can check readability when also set to check grammar. To access this feature in Microsoft Word, for example, click ″Options″ in the spell-check dialog box, choose ″check grammar,″ then select ″readability.″

G.H. McLaughlin developed the SMOG (Simple Measure of Gobbledegook) formula to determine readability in the English language. The adaptation used here has been tested with Spanish and three African languages. The results show that the SMOG formula is also a very good indicator of reading difficulty in these languages. Try it in your language to determine whether it will be a useful tool for you. If not, read your document and try to eliminate long sentences and long words. Do not write in a childish way, but do write in a way that makes the message very clear even to people who rarely read. Checking for readability **before** pretesting can save time and effort.

Below are instructions for assessing readability using the SMOG formula.

For written materials at least 30 sentences in length:

1. Select ten sentences near the beginning, in the middle, and near the end of the material.
2. You now have a sample of 30 sentences. Circle all the words containing three or more syllables in this sample, including repetitions of the same word.
3. Count the number of words circled.
4. Take this number and compare it to the SMOG Conversion Table to determine the estimated reading level of your material.
5. Estimate the educational level of most people in your target group. Rewrite your text, if necessary, to the appropriate readability level for these readers.

SMOG Conversion Table*

Total Number of Words with 3+ Syllables	Estimated Reading Level
0-6	Low-literate
7-12	Primary school
13-30	Some secondary school
31-72	Secondary school graduate
73+	University or post-graduate education

**Adapted from Harold C. McGraw, Office of Educational Research, Baltimore County Schools, Towson, Maryland.*

Adapted from *How to Conduct Effective Pretests: Ensuring Meaningful BCC Messages and Materials*, AIDSCAP, Family Health International.

Appendix 4

Tips for Preparing Print Materials

The following tips may be useful in developing print materials, particularly for low-literate or non-literate audiences.

1. Design, Layout, and Illustrations

Present One Message Per Illustration. Each illustration should communicate a single, distinct message. (See Figure A4-1.)

Figure A4-1. **Present One Message Per Illustration**

La vaccination protège les enfants contre les maladies

Immunization protects children from disease.

Courtesy of PATH and Becton-Dickinson

Limit the Number of Messages and Pages in Each 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 intended audience to determine what is most appropriate for them. The number of pages in a document can affect the cost of printing. Sometimes, wasted paper and higher costs can be avoided if the total number of pages in your printed piece is a multiple of four. Check with your local printers before you decide on the number of messages and pages in your material.

Make the Material Interactive Whenever Possible. An interactive material is one that encourages exchange between the health worker or facilitator and members of the audience. If appropriate, include question-and-answer sections, or review questions that allow readers to use the information in the material.

Leave Plenty of White Space. This makes the material easier to read, follow, and understand.

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 A4-2.)

Figure A4-2. **Arrange Messages in the Sequence that Is Most Logical to the Audience**

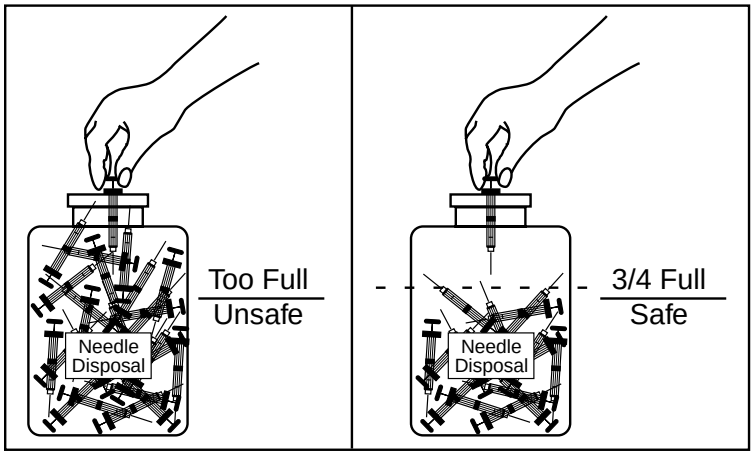
Women who reviewed this sequence about the importance of drinking several glasses of water each day during pregnancy understood the message better when vertical rather than horizontal drawings were used.

Courtesy of PIACT/Bangladesh

Use Appropriate Colors. Use colors that have been pretested with the intended audience. Colors have different meanings 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 Illustrations to Reinforce Text. Placing illustrations throughout the text makes the material more appealing and can help the reader to absorb the information presented. For low-literate viewers, illustrations are critical in conveying the message. (See Figure A4-3)

Figure A4-3. **Use Illustrations to Reinforce Text**



These illustrations from a manual for health care workers helped readers remember and understand the message: "When only three-quarters full, needle-disposal boxes should be sealed and discarded to prevent needle sticks that occur when the lid is pushed down against an overly-full box, or when people must put their hands too close to the points of contaminated needles."

Courtesy of PATH

Use Familiar Images. People understand and are attracted to pictures that seem familiar to them. Expressions, activities, clothing, buildings, and other objects in illustrations should reflect the cultural context of the audience. (See Figure A4-4.)

Figure A4-4. **Use Familiar Images**

This illustration of a well-positioned child getting a vaccination was well received because the clothing and hairstyle reflected local customs.

Courtesy of The World Health Organization

Use Realistic Ilustrations. 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.

Use Simple Illustrations. Avoid extraneous detail that can distract the reader from the central message. For instance, it is easier to see an immunization clinic set against a plain background than against a crowded city street. (See Figure A4-5.)

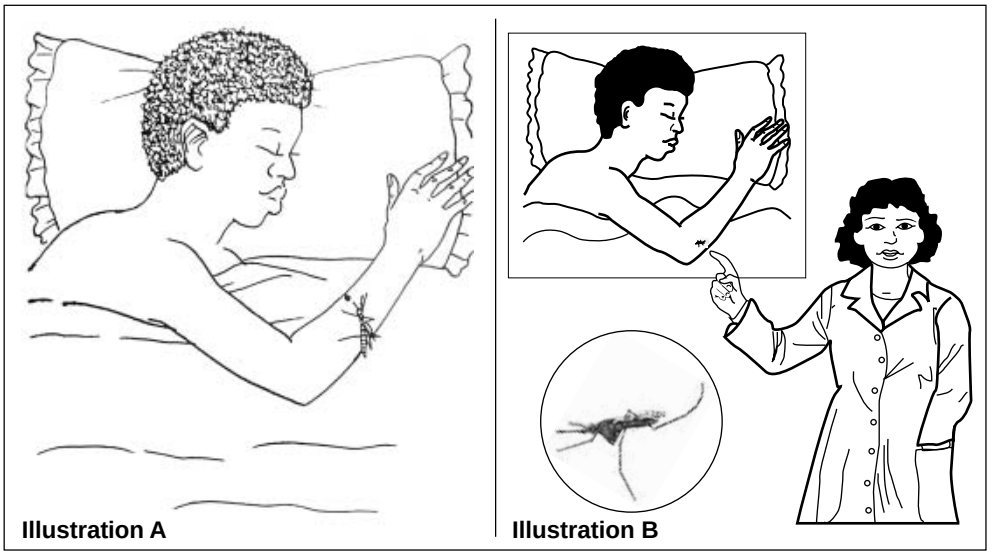
Figure A4-5. **Use Simple Illustrations**

A woman from Sierra Leone walks to an immunization clinic carrying her baby.

Courtesy of the Ministry of Health and Home Economics Association of Sierra Leone

Illustrate Objects in Scale and in Context Whenever Possible. Although large pictures and text are easier to see, excessive enlargement of detail may diminish the reader′s understanding of the message. (See Figure A4-6.)

Figure A4-6. Illustrate Objects in Scale and in Context Whenever Possible



During pretesting of a brochure on malaria prevention, viewers were confused about what was biting the sleeping man in Illustration A because the bugs were so big. Illustration B places the mosquito in context.

Courtesy of the Ministry of Health and Home Economics Association of Sierra Leone

Use Appropriate Symbols. Carefully pretest all symbols with the intended audience. "X's," 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 that represent time are culture specific: in some countries, calendar pages may be used to represent months, while moons and stars may be more appropriate in other countries. (See Figure A4-7.)

Figure A4-7. **Use Appropriate Symbols**

Illustration A

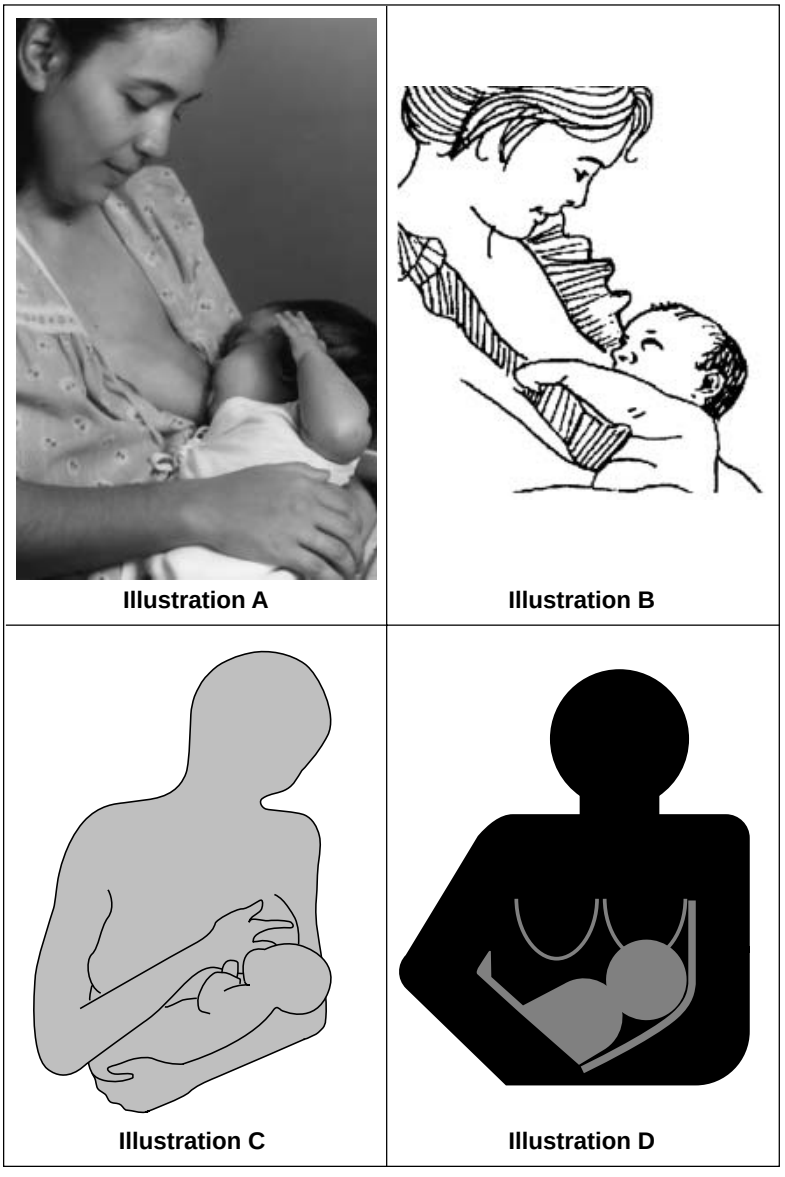
Illustration B

Illustration A uses a moon and stars to illustrate that a woman should breast-feed her child for six months. Illustration B shows a doctor telling a woman that, during pregnancy, she should take only medicine prescribed by a doctor. The use of the familiar hand gesture for "no" or "don't" was understood, while an earlier image of a pregnant woman taking a pill with the abstract symbol of an "X" superimposed over it was either misinterpreted or entirely overlooked.

Illustration A courtesy *of Nestle*
Illustration B *courtesy of the Ministry of Health and Home Economics Association of Sierra Leone*

Use Appropriate Illustrative Styles. Illustrations come in different styles, from line drawings to shaded drawings, photographs to cartoons. Photos without background detail are more clearly understood by some audiences than are drawings. When drawings are more appropriate, some audiences might prefer shaded line drawings rather than simple line drawings. Test shading carefully to make sure that it is acceptable and obvious enough that it is not mistaken for poor-quality printing. Similarly, cartoon figures or highly stylized drawings may or may not be well understood, depending on the audience´s familiarity with cartoon characterizations and abstract representation (see Figure A4-8). Test identical messages, using the same symbols, in several graphic styles to determine which style is most acceptable to, and understood best by, the audience.

Figure A4-8. **Use Appropriate Illustrative Styles**

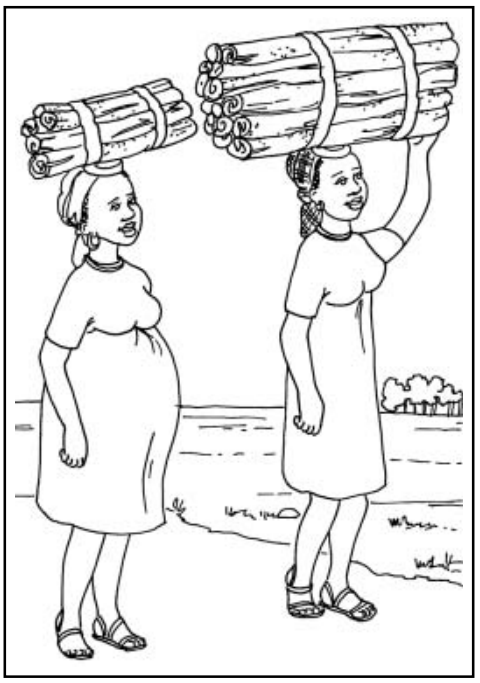


Here, the same message, ˝Breast milk is best for your baby,˝ is shown using different illustrative styles: photograph (A), simple line drawing (B), minimally stylized drawing (C), and highly stylized drawing (D).

Courtesy of Nestle

Take a Positive Approach. Negative messages may be alienating or discouraging rather than motivating. (See Figure A4-9.)

Figure A4-9. **Take a Positive Approach**



This illustration uses a positive message to depict that pregnant women should carry less weight than non-pregnant women should. Illustrating a pregnant woman with a heavy load and putting an *"X"* going through the picture is a common, negative technique that is often misunderstood by people with low literacy skills.

Courtesy of Maendeleo ya Wanawake, Kenya

2. Text

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. Remember that italic and sans serif type styles can be more difficult to read. Also, use a type size that is large enough for the audience to read: a 12-point font for text.

Use Uppercase and Lowercase Letters and Regular Type. Text printed in all upper case letters is more difficult to read. For emphasis, use underlining or distinctively **bold** typeface.

Test the Reading Level. For low-literate audiences, use short words whenever possible, and keep sentences short. For a literate audience, use more complex language, since they may be offended by overly simplified language. If the material has a lot of text, draft materials may be tested with standard readability tests such as SMOG or Fry. Appendix 3 explains how to apply the SMOG test. Proper pretesting with the intended audience usually will indicate whether the language level of a material is appropriate for that audience.

Columns or Wide Margins. Use columns, or allow wide margins around text so the reader has a shorter distance to read from left to right.

Sidebars and Pullout Text. Use sidebars, boxes, and pullouts to tell stories and highlight examples.

Appendix 5

Hiring Experts

If you have decided to work with an outside professional resource to develop and produce your radio or video program, the following steps will help you select the best resource.

Step 1. Get Referrals

Describe your radio or video production needs to colleagues and friends and solicit recommendations for consultants—individuals, companies, organizations, or universities—who may be able to give you the technical assistance you seek. Through references and any other local resources, such as professional associations, develop a list of possible outside experts whom you can contact.

Step 2. Establish Initial Selection Criteria

Establish initial selection criteria to reduce the number of firms you have to choose from and eventually interview. Possible questions to consider include these:

1. Does the firm have expertise in producing a radio or video program on health topics?
2. Have they ever produced a radio or video program similar to ours—similar in format, tone, topic, and special effects, for example?
3. Are they available during our timeframe?
4. Will they work within our budget?
5. Do they have a reputation for working well with clients? Will they work ***with*** us as a team?
6. Do they use equipment—computer software, audio tape players, VCRs, etc.—that is compatible with our systems?
7. Do they react positively to our list of information needs and corresponding choice of program format?

Step 3. Issue Invitation for Proposals

Contact the firm whom you have identified and ask them to respond to your list of questions. It is best to submit this request on paper so that all of the firms are assured of receiving uniform information. The last page of this appendix provides a sample letter you may adapt.

Step 4. Interview Prospective Experts

Review the responses to your request for proposals, and narrow down your choices of consultants to interview by selecting those that best meet your selection criteria. Provide them with additional information about the video, and ask them to prepare a five- to seven-page proposal, with a description of how they would develop the video, budget, and timetable, to present at the interview. Set up interviews with your top two or three choices. Request that the principal expert or staff members who would work on your video be present at the interview.

During the interview, you can use the following, more detailed selection criteria to narrow your choices and make a selection:

1. What additional information did the firm request from us to prepare for this interview?

   List:

2. What does their video production process contain:

   ⇑ Concept development? YES NO

   ⇑ Outline of how they envision the script? YES NO

   ⇑ Samples of similar previous scripts? YES NO

   ⇑ List of filming techniques to be used? YES NO

   ⇑ Concept development team specifics? YES NO

   ⇑ Filming team specifics? YES NO

   ⇑ Availability and cost of filming equipment? YES NO

   ⇑ Description of how we can collaborate in the process? YES NO

   ⇑ Demonstrated understanding of the pretest and revision process? YES NO

   ⇑ Detailed budget? YES NO

   ⇑ Comparative description of different ways the video can be filmed? YES NO

3. Did they bring the requested team members to our interview? YES NO

4. Did they discuss roles and responsibilities? YES NO

5. Did they include our organization in the tasks they discussed? YES NO

6. Did they provide resumes of principal team members? YES NO

7. Did they provide references? YES NO

8. Were their references positive? YES NO

9. How was their interaction with our team during the interview? (Choose one.)

   Poor Fair Good Very Good Excellent

10. How flexible is their work plan? (Choose one.)

    Not at All Somewhat Very Too Flexible

Step 5. Select an Expert

After conducting all the interviews, select the individuals, companies, organizations, or university that best meet(s) your needs. Contact the expert(s) you have selected, and establish and agree on clear expectations of roles, responsibilities, deliverables, and a timetable.

Sample Letter

January 25, 2001

Director, . . .
Re: Invitation to Submit a Proposal
Dear. . .

The National Immunization Program is developing a campaign to increase vaccination coverage in children up to five years old.

As part of this campaign, we want to produce a video to be played in the waiting rooms of all Ministry of Health service centers to educate mothers about the importance of having their children immunized. We would like to have the video available by May 31, 2002.

The video is expected to be three 10-minute segments, for a total of 30 minutes. The first segment will include information about what a vaccine is and how it protects your child; the second segment will cover what vaccinations are available; and the last segment will try to motivate parents to bring in their children for the full course of vaccines, since many do not complete the vaccination schedule.

Our organization has already conducted the initial research to identify what our audience needs to know and the key messages that we want included in the video. We would like your firm´s assistance in flushing out how those messages can be presented in the video, writing a script, hiring any necessary actors or narrators, filming the video, and carrying out all the post-production work through making duplicate copies. All filming is expected to take place locally.

In this initial phase of selecting a firm to conduct the video development and filming, we request that interested organizations provide us with a proposal responding to the following questions:

1. Do you have expertise in producing video programs on health topics?
2. Have you ever produced a video program similar to ours in format, tone, and topic?
3. Are you available during our timeframe?
4. Have you worked with members of any local Ministry of Health service centers before? If so, with whom?
5. What tape format do you use for filming?
6. What do you think of our proposed video structure?

This brief one- to two-page letter proposal is due by February 20, 2001. If you have any questions, please feel free to contact us. Those interested will be given further details for writing a full proposal that includes a budget.

Sincerely. . .

Source: HealthCom, 1995*b*.

Appendix 6

Tips for Producing Radio Materials

Good sound quality in radio refers to the absence of hiss, clicks, rumble, unwanted fading, and distorted tone balance. Sound quality depends partly on technique, partly on equipment—although expensive, state-of-the-art equipment is by no means necessary for high-quality audio production. Definitions of good sound quality can be highly technical. Still, a few simple rules are helpful:

- **Take good care of equipment.** Tape recorders and microphones, the basic tools of radio, are delicate. They should be protected from dust and sand. Tape heads—the devices that record, play back, and erase tapes—should be cleaned periodically with alcohol or they will begin to produce fuzzy sound or blank spots.

- **Mix sounds judiciously.** Radio production often involves combining, or "mixing," sounds in various ways. Background sound effects create atmosphere and help listeners visualize the setting of the action. While it is sometimes appropriate to mix music and voices, music should not overwhelm the voices.

- **Understand the meaning of audio techniques.** Every audio technique has a distinct meaning. For example, a hard splice is an abrupt change from one sound element to another and may suggest a change of place but not of time. A cross-fade, in which one sound element is faded out as another is faded in, may also suggest a change of place but not of time.

- **Avoid bad tape splices.** Radio production usually involves editing tapes to remove unwanted sounds. Use a special splicing block so tape can be cut on a bias to avoid noticeable clicks.

- **Use microphones properly.** Omnidirectional microphones pick up sounds from all directions. Often they should not be used outdoors, because they will pick up extraneous sounds. Cardioid microphones are sensitive to sounds coming from only one direction and are sometimes better for outdoor work. During interviews, hold cardioid microphones about shoulder level and move them from person to person. The optimal distance is six to twelve inches from the speaker. Remember that microphones generate extraneous noise if something rubs against them or their cables.

- **Reference Web sites**. If appropriate, include references to Web sites where listeners can get more information about your topic.

Sources: HealthCom, 1995*b*; Church and Geller, 1989; Gilluly and Moore, 1986; Vincent Dowd, 2000.

Appendix 7

Video Camera Directions, Basic Shots, and Terminology

Basic Camera Directions

1. **Dolly:** To move camera forward and back.
2. **Truck:** To move camera from left to right.
3. **Arc:** To move camera from left to right in a half circle.
4. **Zoom:** In and out; done manually in the camera.
5. **Pan:** Move camera head left to right.
6. **Tilt:** Up and down; move camera head up and down.
7. **Focus:** To manually make a clear image in the camera viewfinder.
8. **Pedestal:** To crank the camera head up and down.

Basic Shots

1. **Close-up (CU):** An object or image seen close up. One object, or part of one object, instead of a scene.
2. **Medium Shot:** A shot of a subject or set showing only part of each. Midway between close-up and long shot.
3. **Long Shot:** Shot actually or apparently taken with the camera a considerable distance away from the subject. When people are included, they are far enough away so that their features are not clearly discernible.
4. **Two-Shot:** Close shot of two persons with camera as near as possible while still keeping them both in shot.
5. **OTS:** Over-the-shoulder shot. A two-shot viewed over one person´s shoulder.
6. **Cover Shot:** A shot that gives the viewer a frame of reference. Usually, a wide-angled shot that shows an entire set, stage, arena, etc.

Basic Terminology

1. **Aspect Ratio:** Proportional relationship of the width of the TV picture to the height. In TV, the aspect ratio is four wide by three high. In movies, the aspect ratio is four by five. If this deviation is not recognized, especially in filmed or kinescope shows, the resulting edge trim, both top and bottom, results in badly framed and incomplete TV pictures.
2. **Barn Doors:** A shade that fits over large flood lights and permits light to be narrowed down.
3. **Composition:** The artistic element of what is considered a good picture. Good judgment is ˝composing˝ a camera shot.

4. **Defocus:** Transition achieved by throwing one camera out of focus until the image is unrecognizable, then cutting to the next camera, equally out of focus, and bringing it into focus, revealing a new image.

5. **Dissolve:** The overlapping fade-out of one picture and fade-in of another picture.

6. **Fade:** In: The TV screen is dark, and the picture gradually appears in full brightness.

   Out: From full brightness, a picture disappears gradually until the screen is dark.

7. **Frame:** In TV, one complete scanning of every part of the field of view being transmitted.

8. **Go Black:** Fade to black. No picture visible. Used for transitions.

9. **Key Light:** Primary source of light.

10. **Monitor:** Refers to loudspeaker where sound is heard (Audio). Refers to TV receiver where video is viewed (Video).

11. **Patch in:** To tie together electrically, camera chain, mikes, lights, etc., to form a circuit.

12. **"Props":** **(Or Properties)** All physical materials used in a scene, such as furnishings, decorations, or articles used by actors in portraying their roles.

13. **Ready:** **(Or Stand By)** Signal by director to technical director and/or cameraman as a warning of intention to use an existing shot, a previously planned shot, a technique, or a combination of shots.

14. **Sneak In:** Very gradual fade of music, light, sound dissolves, etc., whose beginnings or endings are barely perceptible.

15. **Stage Left:** **(Or Right)** Refers to stage positions for actors. Facing audience, actor´s stage left would be to his left; stage right, to his right.

16. **Staging Plan:** A scaled print or plan of the studio or stage floor upon which are recorded the location of walls, setting, doorways, etc.

17. **Still:** Any still photographs or other illustrative material that may be used in a TV telecast.

18. **Strike:** To dismantle or take down sets, props, etc., and remove them from the area.

19. **Telecine:** Equipment used to televise films.

20. **Telephoto Lens:** Very narrow angle lens of great focal length that produces large-size images at extreme distances, frequently used at sporting events.

21. **Test Pattern:** Specially made design of lines and/or circles transmitted for the purpose of correctly setting focus and tuning of an image on a TV screen.

22. Titles: (a) Cards, film, slides—either drawings, printed, or on film—that announce the titles and credits of a program. (b) Any written or printed matter introduced into a show or film for its own sake and not as part of a presentation.

23. Tripod: A three-legged TV camera mount. Cheapest, least desirable type, usually in remotes.

24. Viewfinder: ‶Hood″ on camera, into which camera operator looks at picture that s/he is taking of scene. The viewfinder is found at the back of the camera.

25. VO (Voice Over): Narration-type recording as opposed to lip sync or live sound. Voice over narration where voice talent is not seen.

Source: Reprinted from Arlington Community Television, Virginia, Channel 33, *Producer´s Handbook*.

Appendix 8

Tips for Producing Video Materials

For any type of video:

- **Plan before the production phase.** The production phase is usually the shortest but the most costly. Make sure every step is planned well in advance of the actual shoot date—and that actors, locations, props, and technical equipment are ready before production begins.
- **Repeat, repeat, repeat.** The golden rule with videos is to repeat your key message(s) three times: (1) in a synopsis at the head of the show, tell the viewers what you are going to tell them; (2) in the main body of the video, describe your key message(s) in detail; and (3) at the end of the video, summarize what you just told them.
- **Convey feelings and issue a call for action.** Remember that videos are a highly effective medium for conveying and creating feelings, motivating people, and issuing a call for action. They are not an effective medium for transmitting details.
- **Provide details in print material.** If you need to transmit details to your audience that are too laborious to cover in the video, create supporting print material.
- **Minimize reshooting.** Since reshooting is expensive and time-consuming, make sure plenty of extra footage is shot in case it's needed later.
- **How long?** Expect the process to take twice as long as you anticipated, especially post-production, which includes every step after the actual filming—editing, adding graphics, finding music, etc.
- **Consider involving celebrities and VIPs.** Getting celebrities or VIPs to participate in your video can add glamor and often create free publicity through other media channels such as newspapers or TV. Be sure to take photos to use in print media.
- **Reference Web sites**. If appropriate, include in your video references to Web sites where viewers can get more information on your topic.
- **Produce and duplicate only after all changes are made.** Final production and duplication of the video for distribution should take place only after all changes have been made and approved.

Special considerations for training videos

If you are developing a video to train people in a technical skill, it is helpful to follow these guidelines:

- **Find a technical expert.** Identify a technical expert to supervise the technical content of the film. The advisor helps to identify steps of the procedure, objectively evaluates variations in the procedure, decides which variations should be shown and recommended in the video, and consults other experts as questions arise during scriptwriting and editing. However, the advisor must have the time to devote to the project. It is helpful if the advisor is not personally invested in the procedure being shown. The advisor must be able to distinguish those parts of the procedure that are essential from those that can be modified without diminishing safety or effectiveness.

⇑ **Clearly identify steps in a technical procedure.** A training film of a technical procedure usually presents a recipe that describes every step in a sequence. But when planning for the video begins, the steps often have not been clearly identified. Consult various sources to identify the steps, including:

- Printed material and slides describing the procedure.
- Individuals experienced in the technique being demonstrated, such as clinicians. Ask them to describe the procedure step by step, and record the interviews for later consultation.
- Observe the technique being performed, and take notes.
- Before beginning scriptwriting, videotape the procedure several times using a simple camera and lighting. The producers, writers, and technical expert then review the footage to confirm the steps and procedures. The preliminary taping also gives the camera operator an opportunity to plan camera angles for final shooting.

Sources: Vincent Dowd and Michael Vaughn, consultants; Harper.

Appendix 9

Sample Questions for Pretesting Print Materials

*Ask these questions about **each page**:*

1. What information is this page trying to convey?
2. What does the text mean, in your own words?
3. What does the illustration show?
4. Do the words match the picture on the page? Why or why not?
5. 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.
6. Are there any words that you think others might have trouble reading or understanding? Again, ask for alternatives.
7. Are there sentences or ideas that are not clear? If so, have respondents show you what they are. After explaining the intended message, ask the group to discuss better ways to convey the idea.
8. Is there anything on this page that you like? What?
9. Is there anything on this page that you don´t like? What?
10. Is there anything on this page that is confusing? What?
11. Is there anything about the pictures or the writing that might offend or embarrass some people? What? Ask for alternatives.

*Ask these questions about the **entire material**:*

12. Do you think the material is asking you to do anything in particular? What?
13. What do you think this material is saying overall?
14. Do you think the material is meant for people like yourself? Why?
15. What can be done to make this material better?

*Ask the above questions for **each version of the material**, then ask:*

16. Which version of the material do you prefer? Why?

Appendix 10

Sample Questions for Pretesting Radio and Video

1. In your own words, what do you think is the message of this program?
2. Are there any words in the program whose meanings you did not understand? *If yes, identify the word(s) and ask,* What do you think (*mention the word*) might mean? Which word do you think should be used instead?
3. Can you hear and understand what they are saying? *If no*, what can't you hear or understand?
4. Are there any scenes in the program that you did not understand? *If yes,* explain.
5. Are the music, sound effects, visuals, and dialogue appropriate for this program?
6. Is there anything in the program that you think is not true? *If yes*, what? What about it seems untrue?
7. Does the program say anything that might offend anyone in your community? What?
8. What did you like most about the program?
9. Is there anything about the program that you do not like? *If yes*, what? How would you say it so that you would like it?
10. What do you think this program is asking you to do?
11. Are you willing to follow the advice given to you? What would cause you to be willing to follow the advice? What would discourage you?
12. To whom do you think this program is directed? What about it makes you think that?
13. Who are the people in the program? What were they doing?
14. Where do you think they were?
15. What do you think you will remember most about this program?
16. Do the people in the program talk the way people from here talk? Do they look like people from here? If not, what would you change?
17. In your opinion, what could be done to improve this program?

Two versions being pretested: *If you have multiple versions of your spot or program, ask the above questions for each version, then ask:*

Comparison Questions:

Which of the two programs do you like best? Why?

If you had to prepare a program containing the best parts of each version, what parts would you choose from each?

Appendix 11

Pretest Background Sheet

Interviewer(s): ____________________
Pretest Round: ____________________

Pretest Background Sheet

Topic: ____________________ Material: ____________________

Region: ____________________ Language: ____________________

Date	Resp No.	Schooling			Sex		Age					
Total		# %	# %	# %	# %	# %	# %	# %	# %	# %	# %	# %	# %

Appendix 12

Pretest Data Sheet

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 *Not OK*	Coding: Text *OK*	Coding: Text *Not OK*
		R/H						
		R/H						
		R/H						
		R/H						

Appendix 13

Pretest Summary of Results Sheet

Coder(s) _____
Pretest Round _____
Region _____
Topic of Material _____

Pretest Summary of Results Sheet

Message Number	Total Interviewed	*OK*		*Not OK*		Suggested Changes
		No.	Percent	No.	Percent	

Appendix 14

Group Pretest Answer Sheet

Group Pretest Answer Sheet

Topic: _____

No. of People in this Group: _____

Group No.: _____

Questions	Miscellaneous Information
Question 1: _____ _____	
Question 2: _____ _____	
Question 3: _____ _____	
Question 4: _____ _____	

Appendix 15

Print Material Group Pretest Analysis Form

Group Pretesting Analysis Form for: ____________________

Group #	1	2	3	4	Total	Percent
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						

Group #	1	2	3	4	Total	Percent
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						
Question #						
Response Categories:						
1)________						
2)________						
3)________						
Total						

Appendix 16

Radio and Video Pretest Questionnaire

1. Please tell me, in your own words, what the program said. (What was its message?)

2. Did you feel that the program was asking you to do something in particular?
   1. ____ Yes *If yes,* what?
   2. ____ No
   9. ____ Don´t know

3. Did the program say anything you do not believe to be true? Or unacceptable?
   1. ____ Yes *If yes,* what was not true? Unacceptable?
   2. ____ No
   9. ____ Don´t know

4. Did the program say anything that might bother or offend people who live in (*name of the community*)?
   1. ____ Yes *If yes,* what?
   2. ____ No
   9. ____ Don´t know

5. Was there anything about the program that you particularly liked?
   1. ____ Yes *If yes,* what?
   2. ____ No
   9. ____ Don´t know

6. Was there anything about the program that you particularly disliked?
   1. ____ Yes *If yes,* what?
   2. ____ No
   9. ____ Don´t know

7. What could be done to make this a better program?

Comparative Questions (if more than one program was pretested)

8. You have just seen/heard the two programs again. Of the two, which did you like best?
   1. ____ Title 1
   2. ____ Title 2
   9. ____ Don´t know / indifferent / liked both

   Why did you like this program better than the other? (VERBATIM)

_____

Adapted from *A Tool Box for Building Health Communication Capacity*, Healthcom, Academy for Educational Development, April 1995.

Appendix 17

Monthly Record Form for Distribution of Educational Materials

Monthly Record Form for Distribution of Educational Materials

Name of Health Educator _____ Region _____ Month _____ Year _____

No. of Materials Received		Date Received		No. of Materials Distributed			
Booklets							
Flipcharts							
Flyers							
Others							

Date	Name of Facility	Market	Schools	Hospital	Clinic	Other	Booklet	Flipchart	Flyers	Others

Appendix 18

Evaluation Form

Evaluation Form for Polio Brochure

Attitude Questions

1. If you were at a clinic for a shot, what chance is there that you would pick up this material?
    1. Very good
    2. Good
    3. Poor
    4. Very poor
    5. Don´t know

2. How much of this material would you read?
    1. All of it
    2. Some of it
    3. None of it

3. Does this material:
    1. Encourage you to have your child immunized
    2. Discourage you from having your child immunized
    3. Have no effect on your decision

4. Does reading this material make you feel:
    1. More comfortable
    2. Less comfortable
    3. No effect on my feelings about having my child immunized

5. How well does this material inform you where to get your child immunized for polio?
    1. Very good
    2. Good
    3. Poor
    4. Very poor
    5. Don´t know

6. How well does this material explain the risks of the polio vaccines?
    1. Very good
    2. Good
    3. Poor
    4. Very poor
    5. Don´t know

7. How well does this material explain what to do if there is a serious reaction to the vaccine?
    1. Very good
    2. Good
    3. Poor
    4. Very poor
    5. Don´t know

8. In your opinion, this material was:
    1. Very easy to understand
    2. Easy to understand
    3. Difficult to understand
    4. Very difficult to understand
    5. Don´t know

9. Does this material give you:
    1. Too little information
    2. The right amount of information
    3. Too much information

10. In your opinion, was the material frightening?
    1. Yes
    2. No

11. In your opinion, was the material insulting?
    1. Yes
    2. No

Knowledge Questions

1. How many doses of the polio vaccine are needed?

2. How old should your child be when s/he gets the first dose of vaccine?

3. What is the benefit of getting the polio vaccine?

4. How many kinds of polio vaccine are there?

5. Which vaccine do we give to most children?

6. What should you do if you never had polio drops as a child?

7. When should the polio drops not be given?

8. If you are worried that your child has a problem after getting the vaccine, what should you do?

Adapted with permission from the Louisiana State University Medical Center.

Feedback on the Immunization and Child Health Materials Development Guide

We at the Gates Children´s Vaccine Program at PATH constantly look for ways to make our materials more useful. Please let us know what you like, dislike, and would change about this *Guide*, so we can ensure that the next edition meets your needs even better.

Name (optional):
Address (optional):
Country:
Telephone # (optional):
Fax # (optional):
Email (optional):

Add you to our mailing list? YES NO

1. Please provide a brief description of your organization and your title and area of responsibility.

2. How did you get a copy of the *Guide*?
   __ In GAVI Advocacy Resource Kit
   __ During a training workshop
   __ Requested by phone or letter
   __ Other (please specify: _____)
   __ Downloaded from CVP Web site
   __ From a supervisor or other colleague
   __ Requested by email

3. Did you read the *Guide* from cover to cover? YES NO

4. Did you read only specific steps in the *Guide*? YES NO

   Please indicate which of these you read:

Step 1: Plan your project	YES	NO
Step 2: Identify and study your audience	YES	NO
Step 3: Develop messages	YES	NO
Step 4: Create draft materials	YES	NO
Step 5: Pretest draft materials	YES	NO
Step 6: Produce materials	YES	NO
Step 7: Distribute materials and train in their use	YES	NO
Step 8: Evaluate materials	YES	NO
Appendices	YES	NO

5. How did you use the *Guide*?
   __ Used it to develop materials
   __ Used it in a training workshop
   __ Read/browsed it to update my knowledge
   __ Other (specify: _____)

6. What was most useful about the *Guide*?

7. What was not useful about the *Guide*?

8. Did you implement the materials development process described in the *Guide*?
   a. If yes, what did you develop? YES NO

   b. How would you describe the experience?

9. Was any part of the materials development process unclear or in need of more detail?
   If yes, what? YES NO

10. What would you add to the *Guide*?

11. What would you delete from the *Guide*?

Thank you for taking the time to provide feedback! It will really help when we next update the *Guide*. Please return it to:

Advocacy, Communications, and Training
Gates CVP at PATH
4 Nickerson Street
Seattle, WA 98109 USA
Fax: 1-206-285-6619
E-mail: info@ChildrensVaccine.org

You may also visit and send comments via our Web site: *www.ChildrensVaccine.org*

Childhood immunization saves millions of lives every year and could save millions more if all children, regardless of where they live, receive the vaccines they need. The Bill and Melinda Gates Children's Vaccine Program at PATH works to ensure equal access to new, lifesaving vaccines worldwide. PATH (Program for Appropriate Technology in Health) implements the Gates CVP with funding from the Bill & Melinda Gates Foundation.

PATH's mission is to improve health, especially the health of women and children, and with particular emphasis on improving reproductive health services and reducing the impact of communicable diseases. PATH is a private, nonprofit, international organization headquartered in Seattle, Washington, with offices in Washington, DC; India; Indonesia; Kenya; Mekong Region; the Philippines; Ukraine; and Viet Nam.

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