Designing Print Materials:

A Communications Guide for Breast Cancer Screening

International Cancer Screening Network

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Foreword

Designing Print Materials: A Communications Guide for Breast Cancer Screening was developed as part of an effort to improve the quality of the information that breast cancer screening programs provide to women. This practical guide is part of a set of activities undertaken by the International Cancer Screening Network (ICSN), a voluntary organization of members from around the world. The ICSN works to improve the quality of cancer screening by fostering collaborative efforts aimed at understanding how to use and compare data from screening programs internationally and by developing methods to evaluate the impact of these programs. As part of this effort, the ICSN has identified international quality measures that are being examined in many countries and used to improve program performance and outcomes.

In May 2002, at a meeting in Montpellier, France, ICSN members discussed the important role of communication as part of the screening process and the advances in research on communication and decision-making tools. The ICSN identified a need to summarize the informational materials and decision tools being used internationally by breast cancer screening programs to communicate with women about mammography. The initial assessment of these materials has been summarized in two journal articles that describe the content and types of materials used in different countries (see Geller et al. and Zapka et al., pages 8 and 9). Following this initial assessment, members from many countries identified the need for hands-on guidance about "best practices" to consider in developing print materials. This guide is intended to address that need.

The working group that created this guide benefited greatly from the parallel activities of the European Breast Cancer Screening Network, which was developing guidance for improving the quality of communication materials used within organized breast cancer screening program in Europe (addressed in the 4th edition of the *European Guidelines for Quality Assurance in Breast Cancer Screening and Diagnosis*, released in 2006, see page 8). In addition, the suggestions from members across the ICSN contributed greatly to the development of the manual. It is the hope of all of the ICSN members that this manual will help improve the quality of communication to women about mammography as they make decisions about screening.

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Introduction

- Audience and Purpose of the Guide
- Organization of the Guide
- Using the Guide
- Informed Decision Making and the Development of Education and Information Materials
- Looking Toward Chapter 1
- References and Resources

Evidence from many randomized clinical trials has demonstrated the usefulness of mammography for breast cancer screening. As a result, countries worldwide have established national and regional screening programs. Cancer screening programs take many forms among the international community. Screening may be offered as part of an organized program at the national or regional level using centralized population registries. In some countries, screening is offered opportunistically, that is, screening depends on encounters with health care providers or an individual's decision to obtain the test. Both approaches also exist in some countries.

Essentially, the goal of these public health programs is to help as many women as possible obtain regular screening in order to reduce illness and death due to breast cancer. Ensuring informed choice at the level of the individual woman is an important complementary goal. Because adverse effects are intrinsic to screening practice, participants must understand that a balance exists between benefits (decreased morbidity and mortality from the cancer) and harms (induced morbidity from the screening test, the diagnostic process that follows abnormal screening examinations, and the treatment for the disease). The benefits should outweigh the harms for the women who decide to be screened, but these may be viewed and valued differently by individual women. Those who choose to participate in breast cancer screening believe screening has significant benefits, while other individuals believe that they are benefiting from not participating.

A key component of screening programs, therefore, is the information and education provided about cancer and cancer screening tests and procedures. Women who use breast cancer screening services should receive accurate and accessible information that reflects the most current evidence about mammography and its potential contributions to reducing illness and death as well as information about its risks and limitations.

A large international study of women from Italy, Switzerland, the United Kingdom, and the United States, however, found that most women do not know some fundamental facts about breast cancer and screening. Part of the reason that this information may not be known is that it is fairly complex and difficult to communicate. Understanding information about breast cancer and its benefits and risks, for example, requires an ability to understand numerical concepts. This skill is difficult for many women, especially less educated and less affluent women who already face barriers in accessing screening programs.

As a result, most screening programs have instituted educational and information programs. Because they can be produced relatively quickly and inexpensively, written materials are a key component of these efforts. Written materials can increase the audience's knowledge about health issues and screening services, as well as influence perceptions and beliefs. They can prompt action and/or reinforce behavior. They also can refute misconceptions and show the benefits of participating in screening. They provide an opportunity for program leadership to carefully consider what, why, and how much information should be given to support a woman's decision making.

As important as they are, however, written materials cannot sustain change in complex behaviors or emotionally-laden experiences. Therefore, they are viewed as an integral component of a comprehensive approach to screening education that is grounded in the ethical principles of autonomy, beneficence, do no harm, and justice (see Box I-1). Other components of comprehensive education programs, such as one-on-one counseling and other types of educational media, are used to provide essential reinforcement for and amplification of information contained in written materials.

Box I.1 **Ethical Principles as a Framework for Cancer Screening Education**

Many programs use four key ethical principles to guide them in developing education and information materials:

- **Autonomy** is the responsibility to respect the decision-making abilities of independent persons. People who are mentally capable of making a decision for themselves will be allowed to choose whether or not to participate in screening and the follow-up testing as a general right to determine their own lives.
- **Beneficence** is the responsibility to do good. Applying this principle to cancer screening means that the overall effect of the screening program improves the health of the population.
- **Do no harm** is the responsibility to not cause harm intentionally or directly. In screening, the benefits need to outweigh the harms, knowing that the harms are not directly intended but rather an unfortunate side effect of attempting to improve a person's health.
- **Justice** is the responsibility to fairly offer and make accessible the services and information to all, assuming an equal distribution of risks and benefits to the entire population.

Adapted from: Beauchamp TL, Childress J. *Principles of biomedical ethics*. New York: Oxford University Press, 1979.

Audience and Purpose of the Guide

Designing Print Materials: A Communications Guide for Breast Cancer Screening is intended to help staff of national, regional, and local health organizations create or adapt written breast cancer screening education and information communication tools. This guide provides background and practical information about the design and development of print materials, with a particular focus on the small media of brochures and letters. This guide will help developers understand basic principles involved in planning a print communication project, learning about intended audiences, designing and writing materials, and deciding whether and when to update existing materials or create new ones. It contains numerous practical tips and illustrations taken from countries involved in the ICSN and it provides readers with many useful references and resources.

This guide will help public health and clinical leaders design relevant and effective print materials that reflect evolving evidence about breast cancer and breast cancer screening and that contribute to the goals of national, regional, and local breast cancer screening programs. We acknowledge and emphasize that numerous channels, in addition to brochures and letters, can be used for communication. These include interpersonal channels (face-to-face and telephone communications), group channels (activities in the community), mass media and targeted small media channels (television, radio, newspapers, magazines), posters, and Internet and multimedia channels (email, kiosks, web sites). Many of the issues and methods discussed in this guide are applicable to these other channels as well.

✓ IT OUT!
Appendix 1 provides information about a variety of media formats and guidance on choosing the right one to meet your needs.

Why Brochures and Letters?

This guide focuses on brochures and letters because they are the two most common communications tools used by health organizations to inform and educate women about breast cancer screening. For example, letters are the primary mechanism by which programs communicate with individual women. Letters are used to invite women to participate in breast cancer screening initially and they remind regular participants about upcoming appointments. Organized programs, in particular, depend on invitation letters to encourage women to participate in screening. Letters also are a primary way in which women receive the results of their screening mammogram and receive follow-up instructions should further assessment be needed.

Brochures are a key way for programs to communicate with groups of women. They can provide information about the health organization, the screening program, and the location and operating hours of screening clinics. They are an important way in which programs explain the benefits and risks of the screening test itself. Programs also use brochures to provide other types of information related to breast cancer screening, such as background on breast cancer or on the reasons why follow-up assessments may be necessary. Through all these purposes, brochures give women vital tools for informed decision making. In addition to being used as a "stand-alone" communication tool, brochures are often sent out with letters to individuals as a supplementary communications tool.

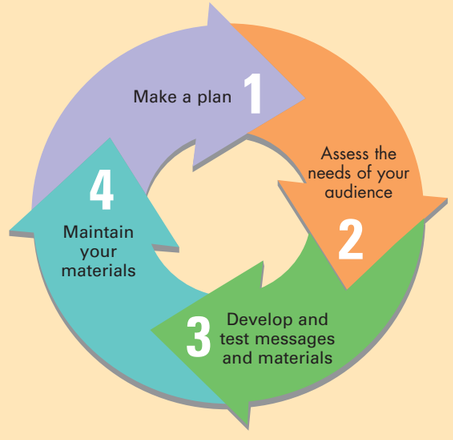
Despite the frequent use of brochures and letters, the skill and effort needed to ensure that they are, in fact, useful and appealing are frequently underestimated. Given the multiple needs and perspectives of program leaders, clinicians, and women, the effective application of communication principles and methods in developing these print materials is important and challenging. This guide can help programs bring the same level of thought and care to planning, designing, and executing these common tools as they might to a larger-scale or more complex communications medium, such as a video or web site.

Organization of the Guide

For educational materials to contribute to screening program goals, they must be based on the needs and perceptions of the targeted audiences, as well as be acceptable to the professionals, organizations, and policymakers who support and provide screening services. They must take into account important characteristics of audiences, such as literacy levels and cultural attitudes toward health care. They also need to reflect frameworks and theories that enhance successful communication, and they need to apply proven design principles.

The remaining chapters of this guide apply these principles as they take you—public health and clinical leaders and staff of screening programs—through the process of developing brochures and letters for use in breast cancer screening programs. As shown in Figure I.1, this process has four phases, which are described in the following chapters:

Figure I.1 **Print Materials Development Cycle**



Adapted from: *Making health communications programs work: A planner's guide* (NCI, 2004). http://www.cancer.gov/pinkbook

- **Chapter 1: Make a Plan** describes the steps involved in initial planning and preparation. These steps will allow you to determine the direction you will follow in your materials development process and guide you in some early materials development decisions.
- **Chapter 2: Assess the Needs of Your Audience** covers the essential tasks of learning about your intended audiences and assessing their communication needs.
- **Chapter 3: Develop and Test Messages and Materials** discusses the practical aspects of developing brochures and letters—creating and pretesting messages and visual concepts, writing content and designing visuals, and testing final draft materials.
- **Chapter 4: Maintain Your Materials** provides guidance on deciding when and whether to update your brochures and letters or to create new ones, and the use of monitoring and evaluation approaches to help you make those decisions.
- **Epilogue: Looking Toward the Future** provides some final thought about the application of this guidance to other cancer screenings and about the future of health communications.

The end of each chapter provides a list of references and resources that we used to develop the material in the chapter. The guide also contains several appendices:

- **Appendix 1** contains guidance on choosing the right communications medium to meet the needs of particular purposes, objectives, and audiences.
- **Appendix 2** contains references and resources on key characteristics of audiences for breast cancer screening education materials.
- **Appendix 3** provides additional background information about methods for assessing audience characteristics and needs. This type of research is useful in understanding your audience and pretesting materials.
- **Appendix 4** provides blank forms to help you plan your materials.

In addition, throughout the guide, you'll find these helpful tools:

- **Icons and notes** in the margins:

TIP! provides tips, suggestions, or useful points to keep in mind during the process.

IT OUT! tells you about useful sources of additional information on a topic or refers you to a related discussion in another part of the guide.

- **Worksheets, tables,** and **checklists** to help you think through and plan each phase during the development of your brochures and letters. Templates with examples are included in the text; blank forms that you can work with are included in **Appendix 4**.
- Numerous **examples** from existing brochures and letters that illustrate the guide's suggestions about important "do's" and "don'ts" of effective print materials.

Using the Guide

A key to using the guide effectively is to understand the phases and steps described in the chapters and adapt them to the specific needs and characteristics of your program. For example, the order and emphasis of steps may differ depending on whether you are creating new materials or modifying existing ones. Additionally, your decisions about steps will reflect the limitations of available resources, which will require you to make informed compromises with the suggestions provided here.

TIP!
Before starting work, it's best to read through all the chapters in this guide. It will help you if you choose to modify the order and emphasis of steps.

Though this guide focuses on brochures and letters related to breast cancer screening, the principles and methods described can be applied to other screening tests. However, your decisions about materials development will vary for different screening tests and will be influenced by resources and models available to you. For example, numerous print materials dealing with breast cancer screening are available in the international community, which can inform the development, revision, and refinement of your materials on this topic. However, fewer examples are available for colorectal cancer. If you are interested in applying this guide's suggestions to developing materials for colorectal cancer screening, you may need to conduct more extensive assessment and design work at the early stages of development than you would for a breast cancer communication tool.

Informed Decision Making and the Development of Education and Information Materials

During the past few years, interest in informed medical decision making (IDM) has grown. IDM was first applied to making decisions about cancer treatment, but in the 1990s, when PSA testing for prostate cancer was introduced and the risks and benefits of this screening test were unclear, it seemed appropriate to expand the use of IDM to helping men decide whether to be screened for this cancer. More recently, uncertainty about breast cancer screening recommendations, such as the age at which to start and stop mammography, has led many to think that IDM also may help women in their decision making about this type of screening. By encouraging people to actively participate in making their own health decisions, IDM promotes a fuller understanding of both the psychosocial and health benefits and risks of recommended medical interventions, including cancer screening. Using an IDM approach in developing communication materials for screening promotes:

- An understanding of the disease and one's risk of getting the disease;
- An understanding of information about the screening test, including risks and benefits of the test, uncertainties and limitations, alternatives to the test, and follow-up clinical services;
- An understanding of one's personal preferences and values and how to apply them to the screening decision; and
- Participation in decision making at the level desired by the person making the decision.

Some concern has been expressed that IDM will decrease participation in screening but as of now, no clear evidence exists to suggest that it either decreases or increases participation. This is an area in which more research is clearly needed. Both high participation rates in screening programs and the active role of women in making their own health care decisions are important. Each screening program needs to make a conscious decision about how much information to provide and how health professional should help women make decisions about screening. This guide provides assistance to programs that choose to include some or all of the principles of IDM.

Looking Toward Chapter 1

With this background and context in mind, you're now ready to begin the materials development process. Chapter 1 deals with the first step of any well-designed project: Making a plan.

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Chapter 1:
Make a Plan

The success of most projects depends on the initial thought and planning that goes into them. Developing brochures and letters for breast cancer screening programs is no different. This chapter guides you through several key decisions that will help you make a plan and figure out the direction to follow during the materials development process.

KEY STEPS IN PLANNING

- Identify your purpose for developing written materials
- Specify your communications objectives
- Consider which topics you want to cover
- Assess available resources
- Identify potential partners and determine their roles
- Establish a materials development team
- Review existing materials

IDENTIFY YOUR PURPOSE

Organized screening programs generally have three distinct phases, and each requires written communication tools that provide general information as well as person-specific information:

IT OUT!
See Chapter 3 for more on targeting and tailoring.

- In the **active screening phase**, women are invited to participate in screening. This phase covers women who have never before participated in screening as well as women who have been screened before. Some women may participate on a regular basis; others may obtain screening only sporadically. Information for this active screening phase is provided through brochures targeted to particular groups of women as well as letters tailored to individual women.

IT OUT!
Page 16 provides a table that suggests information to include for each of these phases.

- In the **reporting results phase**, women are notified of the results of their screening test. Information conveyed during this phase may be very sensitive and so the communications tool must be carefully crafted to answer the woman's information needs.

- The **further assessment phase**, which is only for women whose screening test requires additional testing or recall for a shorter interval, requires information that is specific to the test and follow-up activities.

It's important to first identify an overall purpose for the materials you will use in each of these phases because all of the subsequent decisions you make about communications objectives, messages, and formatting will stem from this decision about purpose. A clear purpose is essential in developing materials that truly help individuals be informed in their decision making.

Purposes for brochures and letters fall into several categories. You may want the women in your audience to:

- **Increase their knowledge** by learning about the importance of screening, the nature of the test itself, the benefits and risks of screening, or learning what to do if follow-up tests are necessary;
- **Become aware** of a testing program or of a new clinic that has recently opened;
- **Change an attitude or belief**, which may enhance motivation to participate in a screening; or
- **Overcome barriers** to getting a screening test.

WORKSHEET 1.1
A Planning Framework Example
We refer to this planning framework throughout the guide. Use it at each step in the materials development process to help your thinking become concrete and focused.

To help you articulate your overall purposes for your brochures and letters and to guide you through your materials development process, we've created **Worksheet 1.1, A Planning Framework Example**. The first stage of this framework, with two examples of purposes, is at the end of this chapter. Use the blank form, **A Planning Framework**, in **Appendix 4** for your own choices.

Once you've decided whether you need brochures or letters for one or more of the screening phases and have articulated your purpose in developing the material, you need to decide a specific communication objective for each of these materials.

IT OUT!
Chapter 2 provides more information about health behavior theory.

SPECIFY YOUR COMMUNICATION OBJECTIVES

A communication objective is the specific impact you expect to produce from exposure to your communication materials. You may well have several objectives for your various materials. Knowing your objectives is important when you begin to develop your materials because:

- You will refer to them when reviewing existing materials;
- You will refer to these objectives continually in the development process; and
- They will help you decide which health behavior theories to use in developing messages

for your materials.

Your screening program may have overall goals for health improvement. These program goals, combined with the communication purpose you've decided and the information you will learn about your intended audiences can help you decide what specific communication objectives you want to achieve. New screening programs will likely have different objectives than well-established programs. For example, through your program's ongoing administrative data collection or your work with your intended audiences, you may have learned that certain segments of your population are not participating at the level your program desires. You may create an objective that is specific to recruiting this population into the screening program. Or, your screening program may decide that the intended audience needs different or more information than what you previously communicated to make an informed decision about whether or not to participate in the screening program. Your objective should reflect this decision. Here are two examples of communication objectives:

IT OUT!
Chapter 2 contains guidance on identifying audiences and segmenting them for your communications purposes.

- By 2008, 75% of women in the southwest region of France will understand the risks and benefits of breast cancer screening.
- By 2009, 90% of working women who are invited to participate in breast cancer screening will be able to attend the screening clinic because the invitation letter contains a formal request that an employee be permitted to take time from work to obtain a screening mammogram (sometimes referred to as "an employment excuse").

TIP!
It's important to use what you know about your audiences in your objectives. You might want to develop an objective like this second one, for example, because you know that the lack of an employment excuse prevents many women from making an appointment for screening.

It is important to ensure that your objectives are:

- Supportive of your overall program's goals and policies;
- Reasonable and realistic (achievable);
- Specific to the change desired, the population to be affected, and the time period during which change should occur;
- Measurable, to allow you to track progress toward desired results; and
- Prioritized to make the best use of resources.

This example shows how a carefully constructed objective meets these criteria:

This objective supports your program's goal, which is to help women understand that follow-up may be necessary.

If you know that 40% of women already understand why follow-up may be needed, this objective is achievable.

By 2009, 50% of patients who have mammography will understand the follow-up required if they get an abnormal test result.

You may already have devoted substantial resources to increasing participation. Achieving this objective will complement existing activities.

The objective is specific and measurable.

Worksheet 1.1, at the end of the chapter, has two examples to help you think through your communication objectives for the brochures and letters you are planning. Use the blank form in **Appendix 4** for your own objectives.

WORKSHEET 1.1
A Planning Framework Example
Find it at the end of the chapter.

Consider Which Topics You Want to Cover

Deciding on your communications objectives in the context of your program's overall communications needs will immediately lead you to your next step, which is to think about the topics you want to cover in your materials. Here are the general types of information you can include in your brochures and letters:

- General information about breast cancer screening;
- Information about breast cancer;
- A description of the process of obtaining a mammogram and its results;
- Facts about test characteristics;
- Information about the benefits and harms of screening; and
- Facts about your program.

IT OUT!
See the sections in Chapter 3 that deal with creating your message and developing your content.

Table 1.1 provides more detail about these categories as well as guidance about which elements to include in brochures or letters. You'll want to refer to this table later on as well, once you actually begin to develop the content of your materials.

Table 1.1 **Topics to Cover in Breast Cancer Screening Materials**

CONTENT	BROCHURES*	INVITATION LETTER*	NORMAL RESULT LETTER	RECALL LETTER**
Screening information:				
• Explanation that the purpose of mammography is for early detection	R	R		
• Age to start and stop test	R	R		O
• Recommended interval between screening	R	O	R	
• Cost	O	R		
• Quality standards and assurances	R	O		
• Other modes of screening	R	O		
• Comments on women outside the age range for screening, including those at high risk of breast cancer	R	O		
Information about breast cancer, including:				
• Incidence	R	R		
• Lifetime morbidity and mortality	R	O		
• Risk factors	R	O		
Mammography process information:				
• Provide appointment information		R		R
• Describe having a mammogram, including how long it will take	O	R		
• Describe informed consent	R	O		
• Describe how to prepare for the test	O	R		R
• Note who performs the test	O	R		O
• Describe how results are provided	R	R	R	R
• Describe results and their meaning			R	R
• Mention what to do if a woman has symptoms between screenings	R			R
• Mention the proportion of women who may require further testing	R	R		R
• Provide reassurance about follow-up	R	O		R
Test characteristics, including:				
• False positive and false negative mammograms	R	O		R
• Positive predictive value	R	O		R
• Number needed to screen to prevent one death	R	O		
• Reasons why further tests are sometimes required	R	O		
Benefits of screening, including:				
• Early detection can save lives	R	R		
• Cancers are found earlier	R	O		
• Early diagnosis generally leads to less aggressive treatments	R	O		
• Screening relieves fear and anxiety about cancer; peace of mind	R			
Harms of screening, including:				
• Complications of additional tests (increased anxiety, biopsies)	R	O		
• Radiation and other types of risk	R	O		
• Identification and treatment of clinically unimportant tumors	R	O		
• Possible pain and discomfort during test	R	O		
• Fear/anxiety about cancer and test results	R	O		
Program information				
• Name of sponsor	R	R	R	R
• Confidentiality and data-sharing policies	R	R	O	O
• Contact information (address, phone number, web site, e-mail address)	R	R	R	R
• Date of publication	R	R	R	R
• Additional sources of further information	R	O	R	R

R = Recommend including for Informed Decision Making **O = Optional**

* If you are sending a brochure and a letter together in the same mailing, you don't have to include information in the letter that is already covered in the brochure.

**Many screening programs will telephone participants about the abnormal test results and follow up this phone call with a letter.

Assess Available Resources

The next step in early planning is to determine what human and financial resources are available to develop, produce, and distribute your brochures and letters. This information will help you define resource needs and determine what you have available to do the job. It also will help you figure out actions you may need to take to fill resource gaps, and it may be a good starting point for your planning the next time you develop materials. Use the following questions and **Worksheet 1.2** to help you think through these questions. For each brochure or letter you are planning, put your initial estimates in the "Preliminary" column.

WORKSHEET 1.2
Assessing Human and Financial Resources
A template is at the end of the chapter. See Appendix 4 for a blank form.

Assess Your Human Resources

- What human skills are needed to carry out this project (for example, health education writing, focus group moderation, interviewing, graphic design, computer skills, meeting facilitation, and development of culturally appropriate materials)?
- Who is available to work on this project? Do existing staff, committee members, and volunteers have the necessary skills and time?
- If existing personnel are not sufficient, how many additional people are needed and what skills and time availability should they have?
- What sources outside the program or agency can supply the staff or skills necessary for the project? Will they donate the staff or skills or do they charge a fee?

Assess Your Financial Resources

- What money do you have available in your budget for this project?
- If you need additional funds, what other sources are available from within or outside the program (for example, grants or donations)? Who is available to apply for the additional funds?
- What materials development costs are associated with this project (for example, concept testing, graphic design, writing, printing, distribution)?
- What overhead and material costs are associated with this project (for example, telephone, postage, space, computers, meeting expenses)?
- What will you need to pay existing staff or outside consultants to complete this project?

As you move along the materials development process and form a definite idea about the materials you are creating and how they are going to be produced and distributed, revisit this exercise. It's a good idea for several reasons:

TIP!
As you move along the development process, revisit and refine your initial assumptions about the resources necessary to develop your materials.

- You may need to alter some of the numbers. For example, you will probably have only a rough idea of your material development costs initially because you haven't yet decided on your graphic design or the

number of copies needed. Once that decision is made, you can insert a definite number and determine how that number affects other aspects of your project.

IT OUT!
You'll find more information about reviewing existing materials later in this chapter. Chapter 3 tells you all about concept testing.

- You may find that you need to rethink some assumptions as you move through the development process. For example, you may initially think that a short brochure announcing the opening of several new screening clinics is all you need. Your available staff and budget are sufficient for this purpose. However, your review of existing materials and concept testing with your intended audiences may tell you that other materials explaining the test and its benefits are necessary.

Go back to **Worksheet 1.2** when you revisit these resource planning decisions. It can help you shift gears and decide what you need to do now that your thinking has changed. Use the "Final" column for your revised estimates.

Identify Potential Partners and Determine Their Roles

You already may have productive working relationships with other screening programs, health agencies, professional organizations, radiology and medical practices, and non-profit advocacy and education groups in your area. Partnerships often allow you to accomplish things that you would not be able to do on your own. Partners are valuable because they can provide:

IT OUT!
Chapter 3 has more information about involving partners in message and materials development and testing.

- Access to a group of people you might not be currently reaching;
- Credibility for your message or program;
- Additional resources (funding, staff, facilities, equipment); and
- Expertise on particular topics.

Consider involving partners throughout the process of developing your materials. Partners can help you determine the kinds of brochures and letters you need to develop and, because they know your audiences, they can contribute useful insights that will help in crafting messages and developing content. It's also a good idea to ask your partners to review your messages and materials for accuracy and completeness during the development and testing phases. After you analyze your results from pretesting, you may want to work with a partner to revise and refine your brochure or letter.

The best partners are those who share your mission, strategies, and education philosophy. Consider carefully which partners to include at which stages of materials development—some partners, for example, may be very helpful when it comes to reviewing brochures for accuracy; others may be more useful as a source of information about specific intended audience segments.

Box 1.1 **Productive Partnerships to Improve Breast Health Awareness and Encourage Screening Mammography**

Europa Donna—the European Breast Cancer Coalition—is a non-profit collaboration of groups across Europe that works closely with the national screening programs of the European Breast Cancer Screening Network (EBCN). Thirty-eight European countries currently participate in Europa Donna.

Through its advocacy and education efforts, Europa Donna plays an essential role in disseminating factual, up-to-date information on breast cancer, promoting breast health awareness, and improving women's knowledge about the need for appropriate screening and early detection.

Europa Donna also was an important contributor to the chapter on communication and screening in the recently revised edition of the *European Guidelines for Quality Assurance in Breast Cancer Screening and Diagnosis*. Learn more about Europa Donna at www.cancerworld.org/CancerWorld/home.aspx?id_stato=1&id_sito=5.

The *Guidelines* are available at www.fp_cancer_2002_ext_guide_01.pdf

Establish a Materials Development Team

Another important task in early planning is to assemble a team of people to design and develop your brochures and letters. Your partners should be included in the team. You have already assessed whether you need to go outside of your organization or have the human resources within and a budget for the team.

Include the members of your team as early in the development process as you can can because this will allow them to become familiar with your program's development process, and to understand the objectives. If they join part way through the process, make sure to bring them up-to-date about what you have learned and done so far. List the services you will need, such as providing access to audiences, pretesting, writing, reviewing materials, layout, artwork, and /or working with printers.

Decide Whether to Hire Outside Professionals for the Creative Components

For some projects, you may decide to go outside of your organization and hire professionals to help you design, write, and develop your materials. These "creative professionals" can not only make things look good but can offer guidance about:

- Efficient use of a limited budget;
- Planning and scheduling material production and dissemination; and
- Production specifications for a wide range of media in addition to brochures and letters.

If you are going to contract for services outside your organization, compile a list of individuals and agencies from which to choose. You can identify creative professionals by noticing health materials that you like that were produced by other organizations and asking them who they worked with to produce the materials. Ask for recommendations from other program managers.

Choose the top two or three professionals or agencies and interview them. Ask to see what other work they have done, and find out what services they offer for what fees. Finally, make sure to interview the people you will actually be working with because large agencies often have more than one creative person or team. You want to make sure that you feel comfortable working with their staff.

Review Existing Materials

The next step is to see what screening communications materials are already available and then review them. Look for materials that are similar to what you have in mind for your program. This review is a good thing for two reasons:

- You may find some materials that you can either adopt or modify to include the information that you want. This will save time and money.
- You may get some ideas for what you would like to develop by looking at materials produced by others, even if they are about a different cancer screening test or health topic.

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Here's an example of national web sites to explore:
The National Cancer Institute's Office of Education and Special Initiatives maintains a one-stop portal for partner organizations. It lists an array of breast cancer education materials (www.ncipoet.org/BreastHealth/index.cfm). NCI's Breast Cancer Screening and Testing web site (www.cancer.gov/cancertopics/screening/breast) is another way to access materials.

You can find existing materials at:

- National, regional, or local health ministries or departments (check their web sites);
- University or public libraries;
- Non-governmental organizations (including advocacy groups such as Europa Donna);
- Health professional associations; and
- Clearinghouses, web sites, and telephone information services specific to a health problem.

The following questions may help focus your review of existing materials:

- Are the messages in existing materials relevant to your communication objectives? Is the information accurate, complete, and current?
- Are the materials appropriate for the intended audience in format, cultural emphasis, and reading level?
- Have the materials been evaluated? If so, ask the publishers whether you can review those findings.
- Do you like the layout, design, and visuals used? Are they pleasing to you and will they be acceptable to your intended audiences?
- Are risk and benefit discussed in a clear and acceptable way? You will need to decide how you want to talk about risk in your materials, and reviewing materials may help you make this decision.
- If you want to adapt an existing material, can you get permission to add your institution/agency's name and logo? You will want to have your own program identified on the materials so it is important to receive permission to do so.

✓ IT OUT!

Checklist 1.1, at the end of this chapter, contains a tool that can help you review existing materials.

✓ IT OUT!

See Chapter 3 for more on discussing risk in brochures and letters.

In your review of existing materials, you may want to adopt a single element—a table or graphic, for example—to include in your own brochure or letter. If so, you will need to find out whether you must pay to use the material. Some materials in the public domain, such as materials produced by governments, are not copyrighted and can be copied for free. Other materials may require a fee to use all or part of the material or they may waive the fee for governmental or not-for-profit organizations. Whether free or not, you will need to check whether the material is copyrighted. If it is copyrighted, you will need written permission to use the materials and you must provide the appropriate citation in your materials (for example, "courtesy of the Japanese Cancer Society"). You should check with the publisher of the material that you are copying to see how they would like to be acknowledged.

Remember that even if you adapt existing materials, you will still need to pretest them with your intended audience.

✓ IT OUT!

See Chapter 3 for more on pretesting materials.

Looking Toward Chapter 2

Once you've articulated your purposes and objectives, created your materials development team, and developed a good sense of similar materials that already exist, you're ready to move on to the next phase—assessing the needs of your audiences. Any good brochure or letter is written with the recipient in mind, and that sensitivity comes only with a solid understanding of your audiences and their needs.

Worksheet 1.1 **A Planning Framework Example**

FORMAT	PURPOSE	OBJECTIVE	AUDIENCE	THEORY	MESSAGE	CONTENT	PRESENTATION
Brochure	Encourage increased participation in active screening [Change attitudes]	By 2007, 50% of patients in the intended audience will regard screening mammography as a beneficial and necessary component of their health care					
Letter	Inform patient about need for additional testing [Increase knowledge]	Patient will understand why further testing is necessary and will know how to obtain it					

Worksheet 1.2 **Assessing Human and Financial Resources (Part 1)**

HUMAN RESOURCES ESTIMATES WORKSHEET

QUESTIONS	PRELIMINARY: MATERIAL A	FINAL: MATERIAL A	PRELIMINARY: MATERIAL B	FINAL: MATERIAL B	PRELIMINARY: MATERIAL C	FINAL: MATERIAL C
1. What skills are needed to carry out this project (writing, focus group moderation or interviewing, graphic design, computers, meeting facilitation, and development of culturally appropriate materials)?						
2. Who is available to work on this project?						
a. Each person's skills						
b. The time each person is available to work on the project						
3. What staff and skills are needed to fill gaps?						
4. What sources outside the program or agency can supply the staff or skills necessary for the project? Note whether donated or paid for.						

Worksheet 1.2 **Assessing Human and Financial Resources (Part 2)**

FINANCIAL RESOURCES ESTIMATES WORKSHEET

QUESTIONS	PRELIMINARY: MATERIAL A	FINAL: MATERIAL A	PRELIMINARY: MATERIAL B	FINAL: MATERIAL B	PRELIMINARY: MATERIAL C	FINAL: MATERIAL C
1. What money is budgeted for this project?						
2. What other sources of money are available from within or outside the program (for example, grants or donations)?						
a. Who is available to apply for the additional money?						
3. What are the materials development costs for this project (TOTAL of lines a.-f.)?						
a. concept testing						
b. graphic design						
c. writing						
d. printing						
e. distribution						
f. other						
4. What are the overhead costs for this project (TOTAL of lines a.-f.)?						
a. telephone						
b. postage						
c. space						
d. computers						
e. meeting expenses						
f. other						
5. What are the human services costs (TOTAL of lines a.-e.)?						
a. staff salaries						
b. staff benefits						
c. consultant fees						
d. other						

Checklist 1.1 **Assessing Existing Materials**

DIRECTIONS:

Assess your printed materials using the following tool. Use the rating scale of 1 to 4 for each item in a major category.

1 = poor, 2 = fair, 3 = good, 4 = very good, N/A = not applicable

For each category, give an overall category rating of (+) *effective* or (–) *not effective* (X) or *unsure*

Name of material_____

Author _____

Intended audience _____

Cost/availability_____

CATEGORY/CRITERIA	RATING 1 TO 4	OVERALL RATING (+)	(–)	(X)
Content				
Is the information accurate, easy to understand, and meaningful?				
Clarity				
Quantity				
Relevancy to intended group (e.g., age, gender, ethnicity)				
Discussion of risks and benefits				
Readability level/difficulty				
Accuracy				
Format/Layout				
Is the overall format style appealing/understandable?				
Organizational style				
White space				
Margins				
Grouping of elements				
Use of headers/advance organizers				
Is the font size/style going to work with my intended group?				
Size				
Style				
Spacing				
Visuals				
Do the visuals support the text? Are they relevant?				
Tone				
Clarity				
Relevancy				
Accuracy				
Aesthetic Appeal				
Is this a publication that is likely to be looked at?				
Attractiveness				
Quality of production				

Adapted from: National Cancer Institute (NCI), National Breast and Cervical Cancer Early Detection Program (NBCCEDP). *Outreach to increase screening for breast and cervical cancer, Part 3: Making cancer communication work training packet.* Trainer Resources, Handout #14. www.cdc.gov/nbccrdb/training/outreach.htm [Accessed November 1, 2006]

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Chapter 2:
Assess The Needs Of Your Audience

- Identify Your Overall Audience
- Recognize the Distinguishing Characteristics of Your Audience
- Recognize the Relevance of Health Behavior Theory in Understanding Audiences
- Make Preliminary Decisions About Segmenting Your Audience
- Learn More About Your Audiences
- Refine and Regroup Your Audience Segments
- Revisit Your Communication Objectives
- Draft a Creative Brief
- Looking Toward Chapter 3
- References and Resources

In order to increase screening prevalence and informed decision making, your screening program will need to communicate its services to a specific population or populations within your region or community. Many screening programs start from what **they** want to communicate to these groups, but, in fact, they need to start from the audience's perspective first. What does the **screening audience** want and need to know? Research has shown that effective communication means creating materials that respond to audience preferences. By successfully defining and then getting to know your audiences and their characteristics, you ensure that your materials are timely, informative, and appropriate.

TIP!
This guide uses the term "intended" audience. Many other publications use the term "target" audiences to mean the same thing.

In this chapter, you will learn the best ways to identify and learn about your intended audiences to determine their communication and information needs. You will also learn the importance of audience segmentation as well as ways to summarize what you've learned about your audience. All of this work will inform the materials development process that you will undertake in Chapter 3.

KEY STEPS IN ASSESSING THE NEEDS OF YOUR AUDIENCE

- Identify your overall audience for your brochures and letters
- Recognize the distinguishing characteristics of your audience
- Recognize the relevance of health behavior theory in understanding audiences
- Make preliminary decisions about segmenting your audience
- Learn more about your audiences
- Refine and regroup your audience segments
- Revisit your communications objectives
- Draft a creative brief

Identify Your Overall Audience

Whether you are starting a screening program, designing new materials for an established program, or revising existing materials, having a clear understanding of who you're trying to reach is an essential first step.

As we described in Chapter 1, breast cancer screening programs typically have three phases: **an active screening phase**, a **reporting results phase**, and a **further assessment phase**. However, screening programs generally have six types of audiences in mind when they develop education and information materials (Table 2.1). These audiences correspond to the phases, and each requires information that is designed to meet their needs. You probably will develop materials for more than one audience.

IT OUT!
See Chapter 1 for more on these three phases.

Table 2.1 **Screening Phases and Audiences**

SCREENING PHASE	AUDIENCE	DEFINITION OF AUDIENCE
Phase 1: Active	Initial screening participants	Those a program is trying to reach for the first time through an invitation
Phase 1: Active	Returning screening participants	Those returning for periodic (annual, biannual) screening
Phase 1: Active	Non-responders	Those not responding to invitations for initial screening
Phase 1: Active	Relapsers	Those not returning for periodic rescreening
Phase 2: Reporting Results	Those waiting for results	Those waiting for results of a screening test
Phase 3: Further Assessment	Those being recalled	Those returning for a second assessment based on results from a first examination

Once you have established in general terms which of these screening audiences you are trying to reach, you will want to learn more about them. It is important to note that the process of defining and learning about your audiences is an iterative process: As you learn more about them, you may have to redefine your original audiences. For example, you may not know who your "non-responders" are until

IT OUT!
This chapter provides general guidance on methods you can use to learn about your audience. Appendix 2 provides details on each of these methods.

after you have examined existing information from your program that can tell you who is in this group. Or, if you are starting a program, you may have to conduct your own research to determine which groups in your community or region are less likely to participate.

Recognize the Distinguishing Characteristics of Your Audience

Intended audiences typically have one or more characteristics or qualities that make them unique or that set them apart from other groups in the general population. As Table 2.2 shows, audience characteristics typically fall into four main categories.

Table 2.2 **Audience Characteristics**

DEMOGRAPHICS	BEHAVIORS	KNOWLEDGE AND ATTITUDES	PHYSICAL CHARACTERISTICS
• Age • Income • Education • Culture (ethnicity, language, religion) • Occupation • Literacy	• Screening behaviors (use of services, screening barriers) • Information-seeking behavior	• Knowledge of screening services • Knowledge of risks and benefits of screening • Attitudes toward screening	• Personal and family health history • Disabilities (learning, visual, hearing, physical)

These characteristics often affect how screening information is comprehended, interpreted, and perceived. As a result, they may influence whether or not a woman attends a screening, returns for follow-up testing, or actively participates in decisions about her care. Therefore, identifying and understanding how certain audience characteristics influence participation in screening will help you learn about the needs of those in your screening population, thereby improving your ability to design and develop brochures and letters that answer those needs

Box 2.1 **The Importance of Recognizing Audience Characteristics**

A screening program in Australia looked at the racial, ethnic, and cultural characteristics of women who were not participating in breast cancer screening. The program determined that women who had immigrated from Asia had the lowest participation rates.

To reach this group, the screening program determined that their intended audience should be women of Chinese ethnicity, aged 40 years and older. Consequently, screening materials were written in Cantonese and Mandarin, the most commonly used languages used by women in this group.

This example highlights the possibility that audiences may have multiple characteristics that need to be addressed, such as speaking one or more languages, having certain cultural attitudes toward health, and having a different level of participation in screening.

Source: Kung EY-L, Chan A-C, Chong Y-S, Pham T, Hsu-Hage BH-H. Promoting breast screen in Melbourne Chinese women using ethnic-specific health promotion strategies. *Internet Journal of Health Promotion* May 26, 1997. http://www.monash.edu.au/health/IJHP/1997/3 [Accessed April 14, 2006]

Be Aware of Key Audience Characteristics

Demographics: Age

The age of your screening audience is an important characteristic to consider. Here are several reasons why age makes a difference:

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The material in this section is taken from many sources. For references and additional sources of information on these topics, see Appendix 3.

- As women become older, the risk of breast cancer increases, especially after age 50. Despite this fact, older women are less likely to be screened than are younger women. Furthermore, physicians are more likely to recommend screening to younger than to older patients. Therefore, considering your audience members' ages, risk of breast cancer, knowledge, and screening behaviors is essential when designing materials to enhance participation.

- Older populations (age 60 and older) may pose significant challenges because of age-related factors, such as vision loss (which makes reading more difficult), and loss of hearing and decreased cognitive ability (which may lead to slower information processing).

- Age also can influence the way in which your materials are received. That is, younger and older audiences may prefer different styles, formats, and presentation of materials.

Understanding and being sensitive to these considerations will help ensure that the content of your materials appeals to different age segments in your audiences.

Demographics: Culture

Culture can be defined as a group's shared beliefs, customs, values, behaviors, norms, and communication patterns. All of these are transmitted intergenerationally as a means to cope with forces within and outside the group. Because it influences knowledge, attitudes, and customs, culture also influences health behaviors. As a result, culture can affect how people respond to health information. Becoming familiar with the cultural preferences of your intented audiences may help you customize your brochures and letters, making them more interesting and salient to your audience.

TIP!
To make sure your materials respond to the cultural characteristics of your audiences, consider including representatives from these groups on your materials development team.

For example, research has found that designing visual materials to reflect the social and cultural perspectives of the audience improves receptivity by making materials seem more familiar and comfortable. The illustration below shows how a screening program in West Australia put these principles to work when they developed a communications tool for Aboriginal women.

Kerry Everett, an Indigenous woman from West Australia designed this logo. The three generations of women stand together symbolizing support for each other. The dots represent the women's breasts behind an x-ray screen. The message aims to encourage Aboriginal and Torres Strait Islander women to have regular mammograms.

Demographics: Literacy, Numeracy, and Health Literacy

Cancer screening information is often complex, and communicating this information to some members of your audiences may be challenging. People with low literacy skills cannot easily read brochures or books, they have trouble following written instructions or explanations, and vocabulary often presents a problem. Low literacy skills make it difficult for them to understand breast cancer screening information, such as

IT OUT!
See Chapter 3 for a more detailed discussion on the presentation of risk and benefit information.

information about the risks and benefits of breast cancer screening, the meaning of test results, or instructions on how to follow up on test results.

Members of your audience also may have difficulty with numbers. "Numeracy" refers to the ability to understand and use numerical concepts, such as percentages or probabilities. People with low numeracy can have difficulty understanding health information. In particular, information about risks and benefits (an essential component of cancer screening information) can be troublesome because these explanations involve numerical concepts. Though low literacy and numeracy are often associated with the elderly, immigrants, and those with lower socioeconomic status, well-educated and literate people also are often challenged by numerical concepts.

TIP!
The World Health Organization defines health literacy as, "The cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and manage good health."

Many studies have shown an association between literacy, numeracy, and health status. Studies suggest that adults with well-developed literacy and numeracy skills are healthier than those with low literacy and numeracy skills because they are better equipped to obtain important health information, which allows them to learn how to improve their health status. This enhanced "health literacy" also may be the result of strong communication skills. People of high literacy may be able to communicate with health profesionals and, in turn, understand what health professionals say to them. This link is critical because being able to understand the information and numerical concepts contained in a brochure or letter is necessary if women are to take action to improve their health and participate in screening. In most countries, low health literacy is a widespread problem. For example, nearly half of all adults (90 million citizens) in the United States have trouble understanding and using health information.

IT OUT!
For more information about the US health literacy problem, see *Health literacy: A prescription to end confusion* (IOM, 2004). http://www.iom.edu/?id=19723

Behaviors

Your audiences may have certain behavioral characteristics, both individual and group, that influence screening participation. For example, some women rarely obtain preventive health services, such as physical or dental exams. Others may be very different, obtaining preventive care regularly and seeking out health information at the library or on the Internet. Understanding these behaviors will provide insights that can inform your decisions about the content and design of your brochures and letters, and can predict how your audiences will react to or act on the screening information you have developed.

Box 2.2 **The Usefulness of Understanding Behaviors in Developing Communications Materials**

A breast and cervical cancer screening program for low-income and underinsured women in the United States needed to address the problem of women who were not returning for repeat periodic mammography.

To develop an intervention focused on women returning for periodic screening, program staff designed a phone survey. Survey items focused on women's readiness and likelihood of returning for a mammogram within the next year. Women also were asked to report important reasons for not being rescreened. Results were used to target materials for a mailed intervention. Content addressed barriers by integrating themes of support, reinforcement, and reminders into motivational messages. The most frequent reasons for not returning for screening (e.g., forgetfulness, busyness, inability to pay) also were addressed in order to encourage "relapsers" to maintain an annual screening. This and other cancer screening interventions that use knowledge and attitude profiling have been shown to increase both screening and rescreening prevalence.

Source: Partin MR, Slater JS. Promoting repeat mammography use: Insights from a systematic needs assessment. *Health Education and Behavior* 2003;30(1):97-112.

Knowledge and Attitudes

Because knowledge and attitudes play such an important role in screening decision making, successful strategies for increasing screening attendance, whether for individuals, groups, or communities have specifically addressed them. Try to think of knowledge and attitudes as special lenses that your audience looks through when making decisions about screening:

- The **knowledge lens**—Increased or decreased knowledge of breast cancer risk, screening services, and risks and benefits of screening can influence beliefs about screening and make a person more or less motivated to participate. Making sure that your brochures and letters fill specific knowledge gaps among audiences is therefore critical to improving participation.

TIP!
Another word that is often used to mean "knowledge and attitudes" is "psychographics."

- The **attitude lens**—A person's attitudes help shape her perceptions and opinions on topics and can influence health behaviors depending on whether the attitudes about that topic are favorable or unfavorable.

Physical Characteristics

Many people have learning, visual, physical, or hearing challenges that influence how they receive and understand screening information. For example, older or visually impaired audiences may need print materials in large type. Learning disabled and cognitively impaired audiences may need help in interpreting screening messages and deciding to seek services. Hearing impaired audiences have been found to have low adherence to screening guidelines and lower levels of knowledge about breast cancer than other groups.

These subgroups are often not well understood because of their small numbers. As a result, they may be difficult to reach and require innovative approaches when communicating information. Programs have explored many options to ensure that they are reaching out effectively to these audiences. For example, the United Kingdom has developed a special brochure for the learning disabled (see page 63).

Recognize the Relevance of Health Behavior Theory in Understanding Audiences

It is clear from the preceding sections that what people know and think influences how they behave. Perceptions, motivations, skills, physical characteristics, and the social environment also can influence behavior. Health behavior theory has provided many insights into the role of these factors, and it is a critical foundation for any communication effort designed to encourage participation in screening.

IT OUT!
The References and Resources section of this chapter provides several useful sources of more information about these theories.

Theory is invaluable in this phase of materials development—assessing the needs of audiences—as well as in the next phase—designing and developing messages and materials—because it helps explain:

- Why people do or do not choose a health-promoting behavior;
- The processes of change; and
- The effects of environmental factors on behavior.

No one health behavior theory is dominant or can be used for all projects. The theory that will be most relevant and helpful to you will depend upon the nature of the screening problem you are addressing, the population affected by the problem, the types of behaviors that need to be activated, and the public health policies and resources that influence the behavior.

Table 2.3 shows some current behavioral theories. The first four theories focus on individual characteristics that influence behavior, such as knowledge, attitudes, beliefs and personality traits. The fifth theory explores the processes between individuals and groups, including family, friends, and peers who provide social identity, support, and role definition.

Table 2.3 **Current Behavioral Theories**

	THEORY	FOCUS	KEY CONCEPTS
Individual Level	Health Belief Model	Individuals' perceptions of the threat posed by a health problem, the benefits of avoiding the threat, and factors influencing the decision to act	Perceived susceptibility Perceived severity Perceived benefits Perceived barriers Cues to action Self-efficacy
	Stages of Change Model	Individuals' motivation and readiness to change a problem behavior	Precontemplation Contemplation Decision Action Maintenance
	Theory of Planned Behavior	Individuals' attitudes toward a behavior, perceptions of norms, and beliefs about the ease or difficulty of changing	Behavioral intention Attitude Subjective norm Perceived behavioral control
	Precaution Adoption Process Model	Individuals' journey from lack of awareness to action and maintenance	Unaware of issue Unengaged by issue Deciding about acting Deciding not to act Deciding to act Acting Maintenance
Interpersonal Level	Social Cognitive Theory	Personal factors, environmental factors, and human behavior exert influence on each other	Reciprocal determinism Behavioral capability Expectations Self-efficacy Observational learning Reinforcements

Adapted from: National Institutes of Health (NIH). *Theory at a glance: A guide for health promotion practice.* Table 11: Summary of theories: Focus and key concepts. Rockville (MD): NIH, 2005. NIH Publication No.: 05-3896. http://www.nci.nih.gov/theory [Accessed April 15, 2006]

The Health Belief Model (HBM). This theory addresses an individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy).

> **Example:** Your intended audience is women ages 60-70. Many women in this age group do not perceive breast cancer as a threat to them. They think that only younger women get breast cancer. You could use insights from this theory to design a brochure that focuses on perceived susceptibility so that this group of women perceive breast cancer as a potential threat for them.

Here's an example of how a program used the Health Belief Model in crafting a letter to potential screening participants. By offering a group trip, the program is attempting to influence the decision to act by easing barriers to screening.

Special Invitation Letter, Split Lake, Manitoba

Dear _____ :

You are invited to take part in a health program for women 50-69 years of age. In Manitoba, breast cancer is the most common type of cancer in women. Women who are 50 years or older are at higher risk.

The best way to find a small cancer is through an x-ray. This is called a mammogram. This x-ray can find breast cancer long before a lump can be felt. Finding the problem early could save your life. Women 50 to 69 years old should have a breast x-ray (mammogram) every two years.

The Split Lake Nursing Station has planned a special group trip on Wednesday, July 19, 2006. The group will leave Split Lake on Wednesday morning, arrive in Thompson by 11:00, have their mammograms during the day and leave in the evening to return to Split Lake. Please phone the health office at 342-2033 to put your name on the list for this trip. There is room for 12 women for the trip.

We hope you will come.

Yours truly,

Marion Harrison
Director

Yours truly,

Murray Wilson
Medical Director

The Stages of Change (Transtheoretical) Model. This theory describes an individual's motivation and readiness to change a behavior. It is based on the premise that behavior change is a process, not an event. This model encompasses five distinct stages: precontemplation, contemplation, decision, action, and maintenance.

> **Example**: You learn from your intended audience that a segment of the population who has never been screened (they are in the precontemplation stage) currently has no intention of being screened because they do not understand the risk and benefits of screening. You could design a brochure that is intended to increase this population's motivation to learn about the risks and benefits, which may move them along the continuum of change toward decision.

The Theory of Planned Behavior (TPB). This theory examines the relationship between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. In TPB, behavioral intention is the most important determinant of behavior.

> **Example**: You learn that the younger, more acculturated immigrant population is more likely to participate in screening than older immigrant women. You decide to ask older immigrant women about their intentions to be screened; whether they see breast cancer screening as good, bad, or neutral; whether most women they know approve or disapprove of screening; and whether they believe that they have control over this behavior. From what you learn, you can create invitation letters to address these attitudes and perceptions.

The Precaution Adoption Process Model (PAPM). This theory names seven stages in an individual's journey from awareness to action. It begins with lack of awareness and advances through subsequent stages of becoming aware, deciding whether or not to act, acting, and maintaining the behavior. The PAPM is similar to the Stages of Change but is used to address different issues. Stages of Change is most useful if you want to address hard-to-change behaviors, such as smoking cessation or overeating, in which people may move back to an earlier stage as well as forward to a new stage. In contrast, in the PAPM people move through all the stages without going back to a previous stage. PAPM also recognizes that people who are unaware of an issue face different barriers than those who have decided not to act.

> **Example**: You may know from your research that certain women in your intended audience may be unengaged in breast cancer screening because they are too busy. You can use PAPM to create materials that address this barrier so as to engage them in screening.

Social Cognitive Theory (SCT). SCT is an interpersonal theory because it assumes that the behaviors of individuals exist within, and are influenced by, a social environment. The opinions, thoughts, behavior, advice, and support of the people surrounding an individual influence her behavior, and the individual has the same effect on others. This theory posits that three main factors affect whether an individual changes her behavior: self-efficacy, goals, and outcome expectancies.

> **Example**: Observational learning through the use of role models is an important element of this theory. So, you may develop a brochure focused on the fact that many of the peers of women in your audience obtain breast cancer screening. To reinforce this focus, you may choose to include a picture of women, representing the intended audience, participating in breast cancer screening at the clinic.

Make Preliminary Decisions about Segmenting Your Audience

Based on what you know about your audience, you may decide that it is small enough or uniform enough that you don't need to divide it into more specific groupings. On the other hand, you may think that the audiences for your screening brochures and letters have one or more characteristics or influencing factors that will affect the way they receive, understand, and act upon the information contained in your materials. As a result, you may decide to divide your overall audience into smaller groups who share a common set of characteristics. This process is called segmenting.

Audience segmentation, which places audience members into well-defined subgroups based on characteristics such as demographics, behaviors, or situations, is widely used by the social and commercial sectors as a strategy to increase the effectiveness of their marketing efforts. The idea behind this strategy is that people in an audience segment are more likely to respond favorably to information if that information is designed to focus on their unique needs, interests, and preferences. Here are some key benefits to segmenting your audience:

- It allows you to select the specific groups within your audience who need or who are most likely to benefit from educational materials or screening strategies.
- It allows you to target and tailor messages and materials to meet the unique needs, interests, and preferences of audiences, thereby increasing the likelihood that those who receive your messages will respond favorably.
- It helps you identify common themes and components among various groups within a diverse population that can be included in general communication tools.

IT OUT!
See Chapter 3 for more information about targeting and tailoring.

You may find that your program's existing administrative data are sufficient to allow you to understand the characteristics and needs of specific audience segments.

IT OUT!
These questions are adapted from *Making Health Communications Programs Work* (NCI, 2004). http://www.cancer.gov/pinkbook

Most organized screening programs that have been operating for some time collect basic data, such as participants' ages, addresses, ethnicities, races, or previous screening histories. This information, combined with your own experience with your audiences and that of your partners' may be sufficient to begin segmenting your audiences.

The following questions can help guide decisions:

- What demographic, behavioral, knowledge and attitude, and physical characteristics have you identified that require an audience to be segmented?
- What audience segment(s) are most likely to benefit from educational materials or a screening strategy?
- What do you already know about these segment(s)?
- What communication objectives for your program will benefit from segmentation?
- What resources are available to research audience segment characteristics that are not well understood?

TIP!
Revisit Worksheet 1.2 to help you answer this last question about resources.

Answering these questions will allow you to create a preliminary list of your intended audience segments. This task also may help you discover that you need to know more about certain groups and their communications needs before you make final segmentation decisions. The next section of this chapter guides you through several methods you can use to learn more about potential audience segments. Once you've done this task, you can complete your audience segmentation.

Learn More About Your Audiences

Even if you have useful administrative data, you may want to gather more detail about the characteristics and communication needs of your potential audience segments. If you are a new screening program, you may want to find out about your audience segments because you have limited or no administrative data that describe your audience.

Several information-gathering methods are available to help you learn about your audiences. The process of obtaining these data involves several steps, described in the following sections.

Determine the Questions You Want to Ask

The first step is to determine what you need to know. Here are a few questions you can ask:

- What do intended audience members already know about screening? Do they have any misconceptions?

- What attitudes, beliefs, and perceptions do intended audience members have that create barriers or facilitators to screening?
- What benefits do intended audience members associate with screening participation?
- How will the social, economic, or cultural situations of intended audience members affect their screening behavior?
- What are the best places to reach participants (doctors' offices, clinics, retail establishments, social or religious centers)?
- What language is appropriate for communication?
- What reading level is appropriate for communicating to participants?

TIP!
Also consider the media habits of your audiences. What other channels do they use to get information—television, radio, the Internet?

Choose Your Information-Gathering Method

Several strategies drawn from commercial and academic disciplines are commonly used in public health to learn more about intended audiences and to develop communication materials. If you have sufficient resources, you may want to use more than one of these methods so that you can gain multiple perspectives on the communications needs of your audiences.

TIP!
Consider using insights from health behavior theory to help you decide which method to use and to guide your search for more information about potential audience segments.

Learn from Existing Data

Population Surveillance Data. Health agencies and health ministries in many countries routinely collect survey data to monitor population health. For example, the National Cancer Institute (NCI) in the United States conducts the Health Information Trends Survey (HINTS) (http://cancercontrol.cancer.gov/hints/). The survey examines how U.S. citizens find and use cancer information. It also asks about screening behaviors. For example, a survey item asks, "Have you thought about getting a mammogram?" A feature on the web site allows for graphical representation (such as bar graphs and pie charts) of the results. The web site also provides a searchable database, summaries of the latest findings, and downloadable datasets.

IT OUT!
Appendix 3 contains more information about these data sources.

Similarly, the World Health Organization (WHO) Regional Office in Europe offers a web site (http://www.euro.who.int/hfadb) that provides population data, including health tables, graphs, and statistics, based on European Union (EU) population health indicators.

Literature Reviews. These searches of the academic literature can help you learn what others already know about your audience. They offer a wealth of information about various audiences and can be accessed through libraries, universities, and the Internet. Databases of research studies published in

academic journals and other publications offer the latest evidence-based approaches to cancer screening interventions and programs conducted with diverse audiences. These can provide timely insights and knowledge about the characteristics of specific audience segments.

Learn Directly From Your Audiences

Surveys, Interviews, and Focus Groups. These methods of learning about intended audiences can help you understand their knowledge, beliefs, attitudes, and values as well as barriers and facilitators related to cancer screening:

IT OUT!
Appendix 2 contains additional information about these information-gathering methods

- Phone and paper and pencil **surveys** usually contain closed-ended questions (i.e., questions requiring only defined answers, such as yes or no or multiple choice) to assess audience needs.
- **Focus groups** are group discussions on specific topics in which moderators ask open-ended questions (i.e., questions designed to stimulate discussion; they often begin with what, when, where, or why). Though the information elicited from focus groups cannot be considered representative, it is particularly valuable because it can provide rich and nuanced insights into the needs of your intended audiences.
- **In-depth interviews** are unstructured one-on-one interviews with audience members. Like focus groups, in-depth interviews often yield rich information about a topic and an audience.
- **Key informant interviews** can be conducted with individuals who may have professional or in-depth knowledge of cancer screening participation or who are knowledgeable about particular audience segments.

Decide Whether to Work with Professional Research Organizations

You may want to identify and partner with professionals and organizations familiar with consumer or market research methods. These may include private market research and public relations firms or universities who contract their services.

IT OUT!
See the section, Establish a Materials Development Team, in Chapter 1 for tips on hiring an outside firm.

These groups provide a variety of services, including recruiting participants, conducting focus groups, and interviewing intended audience members by telephone or in person. Services can also include summarizing data into a final report and presenting results to organization members. Although you will likely need to pay for such services, the expertise of these professional research groups may save you time and resources in the long run.

Summarize Your Audience Data

Once you have gathered your audience data, you will need to analyze and summarize them. You will want to make sure that your summary:

TIP!
An added bonus is that this summary will greatly assist in the next step of the materials development process.

- Highlights particular audience characteristics that influence how audience members receive and process screening messages;
- Provides you with the information you need to create useful and relevant messages and content for the audience; and
- Presents audience research information in a format that is easy to understand.

You can choose from among several formats to present the results of your audience research so that others can use it to develop educational and informational materials. These include reports, executive summaries, or fact sheets that may contain an analysis of the data with accompanying statistical tables and charts or graphs.

Refine and Regroup Your Audience Segments

Now that you have identified your overall audience, made some preliminary decisions about whether or how to divide them into segments based on common characteristics, and learned about your audiences so that you understand them more fully, you are ready to refine your segments. Revisit your original list of audience segments. You may want to make your segments more specific in some way or you may even want to regroup audience members along a different set of common characteristics. If you are satisfied with the segments you have, you may just want to jot down some identifying characteristics or communications needs. Fill in your refined audience segments in the appropriate column of **Worksheet 1.1** and note which behavioral theory you'll use to guide you. To show what we mean, Table 2.4 carries forward the examples we began in Chapter 1 (p. 22) and adds the audience and theory information. It's important to note, though, that you don't have to consider these decisions as cast in stone. The needs and characteristics of your screening population are likely to change over time. For example, they may change as individuals develop more screening experience and the behavior is adopted and maintained. It is important to be aware of these audience changes over time so that you can adjust your segments and communications materials as the needs of your audiences evolve.

WORKSHEET 1.1
A Planning Framework
Find it in Appendix 4.

Table 2.4 **A Planning Framework Example...Continued**

FORMAT	PURPOSE	OBJECTIVE	AUDIENCE	THEORY	MESSAGE	CONTENT	PRESENTATION
Brochure	Encourage increased participation in active screening [Change attitudes]	By 2007, 50% of patients in the intended audience will regard screening mammography as a beneficial and necessary component of their health care	Recent Asian immigrants, age 50-60	Stages of Change			
Letter	Inform patient about need for additional testing [Increase knowledge]	Patient will understand why further testing is necessary and will know how to obtain it	Older woman with abnormal result on screening mammogram	Health Belief Model			

Revisit Your Communication Objectives

Having learned about your audience and segmented it, now is probably a good time to go back to Chapter 1 and look again at your communication objectives. Are they still appropriate and realistic, given what you now know about your segments? If you need to make adjustments, fix that column in **Worksheet 1.1**.

Draft a Creative Brief

The final step in this "assessing your audiences" phase is drafting a document called a creative brief. This document is essentially a summary of what you have learned from existing data and your audiences about communicating with your audiences. Use **Worksheet 1.1** and your summary of the information you gathered on your audience to help you develop your creative brief. It doesn't have to be long or complex but it is important because it is the foundation for the work you do in the next phase—materials development. Writing it will help you know whether you have enough information to begin developing messages and content. It's also a good way to make sure that everyone on your materials development team has all the information they need. Sharing it with your partners also can help ensure their agreement with your decisions so far.

Your creative brief should include the following elements:

- A definition and description of your intended audiences;
- A description of the action, emotion, or knowledge you want to change through exposure to your materials; knowing what the intended audience already does, knows, and feels and why will help you identify what to change and how to do it;
- A list of the obstacles to changing knowledge and attitudes or to taking a desired action;
- The consumer-perceived benefit of participating in cancer screening (most behavioral theories say that perceived benefits can motivate participation in cancer screening); and
- Some initial thoughts about the image and tone you want your brochures and letters to convey.

✓ IT OUT!
You will significantly expand these thoughts about image and tone during the next phase, discussed in Chapter 3.

Looking Toward Chapter 3

Becoming familiar with your intended audience by understanding their unique characteristics and communication needs requires an investment of time and resources. But your efforts will be rewarded by the development of meaningful and inviting brochures and letters that motivate your intended audiences to participate in breast cancer screening and become more involved in decisions about their health care. Chapter 3 takes you through next step—messsage and materials development.

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INTERNATIONAL CANCER SCREENING NETWORK

Chapter 3:
Develop And Test Messages And Materials

In this chapter, you will apply what you learned in Chapters 1 and 2 of this guide. You've completed your preliminary planning, you've learned about your overall audience, and you've decided on particular audience segments. Now you're ready to begin crafting your messages, developing content, and pretesting your materials.

KEY STEPS IN DEVELOPING AND TESTING MESSAGES AND MATERIALS

- Design your messages
- Create a rough draft of your messages
- Refine your messages
- Make preliminary decisions about approach, layout, and visuals
- Pretest your messages and preliminary formats
- Develop your content and visuals
- Pretest your final materials
- Analyze your results and revise your materials
- Make printing and distribution decisions

DESIGN YOUR MESSAGES

At the heart of every communications tool that is intended to inform or educate—brochure, letter, TV advertisement, or radio spot—is a message. A message is the main idea or point that you want to convey through your communication tool. You'll probably develop multiple messages for your brochures or letters.

IT OUT!
See Chapter 1 for more on the four ethical principles and the IDM approach.

Paying particular attention to designing your messages is important because they should build on everything you've done so far in the materials development process. You'll start from the four ethical principles and the IDM approach, should you choose to use it. You'll incorporate the overall purposes and communications objectives and you'll draw from the knowledge of your audiences that you gained through your program's experience and your research. You use the insights of health behavior theory to determine the right message for a particular intended audience.

The following sections take you through the process of constructing your messages

CREATE A ROUGH DRAFT OF YOUR MESSAGES

Begin your message development by thinking back on the six major audiences we introduced in Chapter 2:

- Initial screening participants
- Returning screening participants
- Non-responders
- Relapsers
- Those waiting for results
- Those being recalled

What is your overall purpose in developing a brochure or letter for them: Increasing knowledge about the screening test itself or about breast cancer? Changing attitudes about test risks and benefits? Providing instructions about preparing for a mammogram or how to get a follow-up assessment? General messages to accomplish these purposes could include, "A mammogram could save your life by detecting cancer early" or "Mammography has some risks, but its benefits outweigh the risks" or "It's time to take action."

IT OUT!
Table 1.1 in Chapter 1 contains a list of possible topics for breast cancer screening brochures and letters. This list may help you get started in thinking about messages.

Table 3.1 provides an example of a draft message that flows out of a purpose and intended audience. Use the blank form for Table 3.1 in Appendix 4 to help you think through messages that might apply to your general audiences in light of your purposes in communicating with them. Remember, even though your message may use similar wording to a tag line or actual text, it's not the same thing—a message is the main idea or point you want to convey.

Table 3.1 **Purpose, Audience, and Draft Messages**

PURPOSE	AUDIENCE	DRAFT MESSAGE
To ensure that women who are recalled return for additional tests	First time screening participants	Most women who are recalled for testing do not have cancer.

Refine Your Messages

Once you have a rough idea of the messages you want to convey, you can then refine them in light of your more specific communications objectives and your audience segments. Also consider how health behavior theory might help you to refine your message.

As you refine your messages, you'll want to think about targeting and tailoring. Targeting refers to directing a message to a **predefined segment of the population.** Targeting is usually done with brochures because they contain general information that groups of people will find useful and interesting. When targeting messages, focus on the specific needs of the audience segment you have selected. For example, you may know that women who receive recall letters for further testing are very anxious. You decide, therefore, to target some messages to women who are being recalled. Your audience research has revealed some of the reasons why this audience segment is not participating. This allows you to develop specific messages based on the barriers and facilitators you have identified that affect participation rates in this group.

Tailoring a message refers to using information to **make a message specific to an individual**. Screening programs generally use this approach when they develop various types of letters:

- Invitation letters to first-time participants;
- Reminder letters to regular screening participants;
- Letters containing the results of a screening test; and
- Letters requesting participants to return for further assessment based on results of a prior test.

Tailoring means incorporating unique information about a person, such as age, risk factors, or previous history of screening tests, into the message. This information is generally taken from a screening program's computerized patient database. Tailoring ensures that the information in the letter has more personal relevance and contains less information that is not important to the

individual. Research has shown that tailored messages are more likely to be read, remembered, and retained than non-tailored messages and that, in some instances, are more effective than a non-tailored message.

✓ IT OUT!
Tailoring also can be done electronically when a woman enters information into a web site and then receives information specific to her in return. See Rimer (1999) for more information about the use of computers to tailor information. Also see p.64, later in this chapter, for a template of a tailored letter.

Keeping communications objectives, audience segments, theory, and targeting and tailoring in mind, Table 3.2 shows how a rough draft message becomes refined. Use the blank form for Table 3.2 in Appendix 4 for your own refined mesages.

Table 3.2 **Refined Messages**

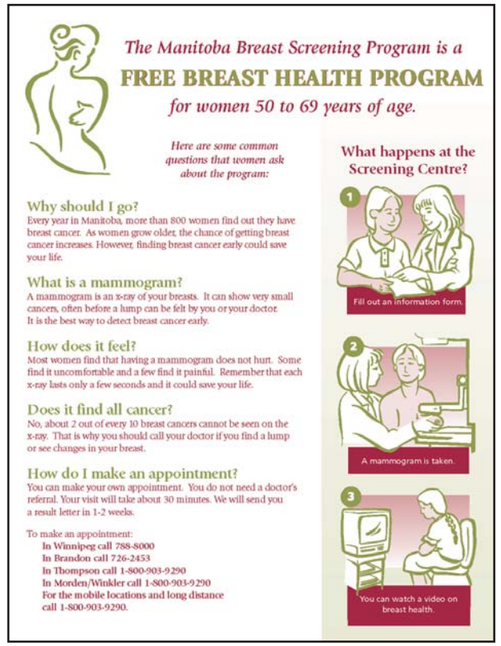
PURPOSE	COMMUNICATIONS OBJECTIVE	AUDIENCE SEGMENT	THEORY	TARGETED/ TAILORED MESSAGE
To ensure that women who are recalled return for additional tests	Women who are recalled will know that most women who have additional testing do not have cancer.	First time screening participants	Social Cognitive Theory	Women like yourself having their first mammogram are often recalled for additional testing because we have no prior mammograms to compare to. Do not be alarmed. These women rarely have cancer.

Make Preliminary Decisions about Approach, Layout, and Visuals

At the same time that you are constructing your messages, make some preliminary decisions about the approach you'll use in writing the content and in creating a "look" for your brochure or letter. These decisions involve:

- The size and design approach for a brochure;
- The writing style you'll use in the brochure or letter;
- Whether to use the same graphic approach as your existing materials or switch to a new look;
- The approach you will use to discuss complicated issues, such as risks and benefits;
- Whether to include charts and graphs;
- Whether to use photographs or illustrations; and
- Whether to include your program's logo on each brochure and letter.

Go back and review the materials you gathered during your preliminary planning. These materials, plus your own program's materials, should give you ideas for an overall visual approach and layout. You may want to develop some rough mock-ups to show to your intended audience. If you don't want to go through the expense of developing visuals, you can show a variety of layouts and pictures from existing materials to test what the audience likes best. Here are examples of two very different kinds of options you could test. The example on the left is from Canada's Manitoba Breast Screening program; the one on the right is a brochure from New Zealand.



Manitoba Breast Screening Program. Winnipeg, Manitoba, Canada.
www.cancercare.mb.ca/MBSP/mbsp_health.shtml

Breast Screen Aotearoa.
New Zealand Ministry of Health.
www.healthywomen.org.nz/DEFAULT.aspx

Pretest Your Messages and Preliminary Formats

After you have developed your preliminary messages and made initial decisions about layout and visuals, you'll want to get feedback on them from your intended audiences. This pretesting will enable you to make final decisions about your messages, content, and approach before you plunge into the final writing and design.

TIP!
This testing of preliminary messages and visuals is called "concept testing."

Pretesting is strongly recommended because it ensures that your intended audience finds your message understandable, motivational, informative, personally relevant, appealing, acceptable, and culturally appropriate. It is important, however, to keep in mind its limitations. Pretesting cannot guarantee or predict learning or motivation. For example, qualitative pretesting, done through the use of focus groups, is not statistically precise and its findings may not be generalizable to a larger audience. Pretesting also is not a substitute for experienced and expert judgment. Finally, when budgets are limited, it may be difficult to conduct extensive pretesting. Think about ways to use internal resources, and prioritize testing methods so that you can make the most of your budget.

In-depth interviews or focus groups are the best way to pretest your messages and visual concepts. Tables 3.3 and 3.4 can help you to decide which method is best for your purposes. Consider taping your focus groups or interviews. Having this record, in addition to your handwritten notes from the sessions, will help you analyze your results later.

Table 3.3 **Best Times to Use In-Depth Interviews**

WHEN…	FOR EXAMPLE…
The subject matter is complex.	It is difficult to express risk clearly because it is a very complex issue. You may need to ask in-depth probing questions to really understand how women interpret your risk messages.
The subject matter is highly sensitive.	Women may appreciate reviewing sensitive materials one-on-one rather than in a focus group.
Respondents are geographically dispersed.	You would like to review your materials with women from various regions of your country to make sure they are acceptable and understandable throughout your country but it would be difficult to gather a group of women from around the country or region.
Peer pressure might make group discussion difficult.	If women or gatekeepers are deeply divided in their opinions, it might be more useful to conduct individual interviews so respondents can speak frankly about their opinions.

Table 3.4 **Best Times to Use Focus Groups**

WHEN…	FOR EXAMPLE…
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.
A variety of questions must be answered.	Focus groups are flexible and can be used to test a variety of research questions, including pretesting messages and visual display for comprehension and acceptability.

Decide What Issues to Cover During Pretesting

During pretesting you want to learn what your intended audiences think about the ideas you are trying to communicate through words and visuals. You want to observe and hear how they react to the concepts and why they react as they do. You also need to get a sense of whether audience members perceive that your communication objectives are reflected in the materials presented to them during message testing.

IT OUT!
Apendix 2 contains guidance on developing focus group and in-depth interview guides.

Before you get into the prestesting itself, determine what questions you want to ask and how you want to structure your focus groups or interviews. Write a focus group discussion guide or in-depth interview guide. Use your communications objectives to determine what you want to ask. For example, if one of your objectives is to enhance understanding of breast cancer incidence, ask questions to see whether participants understand the concept of how many women will get cancer in their lifetime.

IT OUT!
For more on this study, see Domenighetti, 2003.

Asking about participants' understanding of concepts is particularly important because many misconceptions about screening exist. For example, researchers surveying women in four countries found that the majority thought that mammography prevents breast cancer, rather than detecting it early. A sample question might be, "When you think of breast cancer screening after you read these messages, what comes to your mind first?" If early detection is not mentioned, use a follow-up probe such as, "What else comes to mind?" You may even want to see whether your intended audience understands the term "screening." This is a concept that many women do not comprehend and you may want to talk with them about the best way to explain it.

Test for Comprehension

- Does the audience understand the message? A question might be "What does the message ____ mean to you?" "Can you rephrase the message?"
- Does the message contain words or ideas that the audience finds hard to understand? You could ask, "Does this sentence have any words or ideas that you find confusing or unclear?"
- Is the message communicated using the language commonly used by the intended audience? You could ask, "Does this message have words that you would not normally use? If so, what are they and what would you say instead?"
- Are the visual concepts clear? You could ask, "Do you understand what this picture is trying to show you? Could you explain to someone else what's happening in this picture?"

Test for Acceptability

- Are words, ideas, images, and layout pleasing to the intended audience?
- Are any words, ideas, or images offensive to any groups in the audience?
- Are the messages important to your audience? Should any other ideas or messages important to the audience be included in the material?
- Are too many messages or visuals being conveyed at the same time? Should some messages or visuals be eliminated?

Involve Professionals in Pretesting

Also test your messages, visuals, and layouts with the professional groups that will be sponsoring the materials or involved with distributing and using the materials. This may include physicians and their staff, policy makers, and non-profit agencies. Ideally, these professionals will have been included in the entire process of development. Remember to orient them about the objectives of the material and what you know about the intended audience so that their feedback is based on the information you have used to develop the materials. When selecting these professionals, consider the following.

TIP!
These professionals are also called "gatekeepers."

Think about your purpose. Reviewers should have relevant knowledge to contribute, and/or be pivotal to sponsorship, adoption, and dissemination of the educational material. If the objective is to make sure medically-related information is accurate, look to physicians, other medical personnel, and other subject experts. If the objective is to confirm that materials are culturally appropriate, ask local community leaders or non-profits who work with members of the intended audience. To efficiently and effectively disseminate the material, look to health organizations, governmental agencies, or local non-profit organizations. If you expect the materials to be distributed through an organization, have decision makers in the organization review them to make sure they will be used.

Consider your time frame. Experts may be very busy, so make sure you allow sufficient time for a careful review to be done and for those comments and suggestions to be incorporated in your materials.

Consider your budget. Will you need to compensate experts for their review? If you do not have money budgeted for expert review, consider whether people within your organization or partner organizations have the necessary skills to do the review.

Here are some questions you can use to guide a gatekeeper's review:

Test for Content

- Do the messages convey accurate and up-to-date information?
- Are all the important content areas included?
- Are the visual layout and presentations accurate?
- Should other information be included? If so, what is it and why should it be included?

Test for Acceptability

- Do you agree with the approach of the material?
- Do the messages or visuals contain anything offensive to the intended audiences?
- Do you think that the message and visuals will be acceptable to the intended audiences?

Analyze Your Findings and Refine Your Messages and Visual Concepts

Summarize your findings in a report that includes a description of the pretest's objectives and participants, how and where the tests were administered, and the conclusions that emerged in the focus groups and interviews. Include recommendations for revisions and copies of instruments (questionnaires, discussion guides) used. When reviewing your results, look for general trends and agreement on issues, but also note disagreements. It's more valuable to capture the range of opinions about an issue, rather than just to focus on agreements or consensus.

Pretesting may bring up some suggestions and concerns, but it is always your decision as to whether to incorporate those suggestions or address those concerns. A common error is to over-generalize findings from preliminary pretesting: If 20 out of 40 people in your pretest found an aspect of the material confusing, it doesn't mean that half of the general public will. Still, it does suggest that you may want to strongly consider revisions to address that issue.

The number of respondents participating in the testing may affect the weight you give to each person's opinions. If, for example, 3 out of 50 people share a particular response, it may not be as much of a concern as having 3 out of 10 people share that response. Also consider the nature of the comment. Remarks indicating a problem with message comprehension need to be considered very

carefully. Some changes might be fairly simple to make (for example, choosing words that are more easily understood or more clearly labeling illustrations), so you might make those changes even if only a few respondents note them. Comments about the appeal of the material might be less of a concern if brought up by only a few participants, as no format will appeal to everyone. You might need to start over if participants found the materials so confusing that the key behavioral objective could not be identified, or the messages had little personal relevance to the members or were culturally inappropriate.

Once your have refined your messages, go back to **Worksheet 1.1** and fill in the message column with your final messages. Table 3.5 carries forward the examples we began in Worksheet 1.1 and adds the messages.

WORKSHEET 1.1
A Planning Framework
Find it in Appendix 4.

Table 3.5 **A Planning Framework Example...Continued**

PURPOSE	OBJECTIVE	AUDIENCE	FORMAT	THEORY	MESSAGE	CONTENT	PRESENTATION
Encourage increased participation in active screening	By 2007, 50% of patients in the intended audience will regard screening mammography as a beneficial and necessary component of their health care [Change attitudes]	Recent Asian immigrants, age 50-60	Brochure	Stages of Change	The benefits of screening mammo-graphy outweigh the risks.		
Inform patient about need for additional testing	Patient will understand why further testing is necessary and will know how to obtain it [Increase knowledge]	Older woman with abnormal result on screening mammogram	Letter	Health Belief Model	You need follow-up testing.		

Develop Your Content and Visuals

Now that you've tested your messages and concepts with audience members and experts, you're ready to actually create your draft materials. These are considered "draft" because they will go through at least one round of audience pretesting before they go into final production.

The following sections walk you through this process—things to consider as you write the materials and tips to make sure your materials are easy to read and visually appealing.

Get Started

IT OUT!
Refer to the topics in Table 1.1 in Chapter 1 if you need help in identifying your key points.

Write a list of the key points you want to cover. Review what you know about your audience segments. Identify the concerns and issues you want to address and the misconceptions you want to modify. Look at the results from your pretesting to identify the words and approaches that resonated with your audiences. Identify what information will be new to your audiences and what points will be reinforcing already known information. Then write down the key points that convey your messages.

Develop an outline of what you want to say. Your outline should progress through your key points in a logical and clear manner. Make sure it addresses your communications objectives. Remove anything that is not essential to your objectives.

Make sure your facts are accurate and come from reliable sources. Government and academic publications are excellent sources of current and accurate information. Avoid using abbreviations, acronyms, jargon, or technical terms unless you must, and then you should define them.

Make Your Written Materials Easy to Read and Understand

The following suggestions will help your words communicate effectively.

TIP!
To calculate reading levels, see:

SMOG formula
www.cdc.gov/od/ads/smog.htm.

Fry readability scale
www.cdc.gov/od/ads/fry.htm.

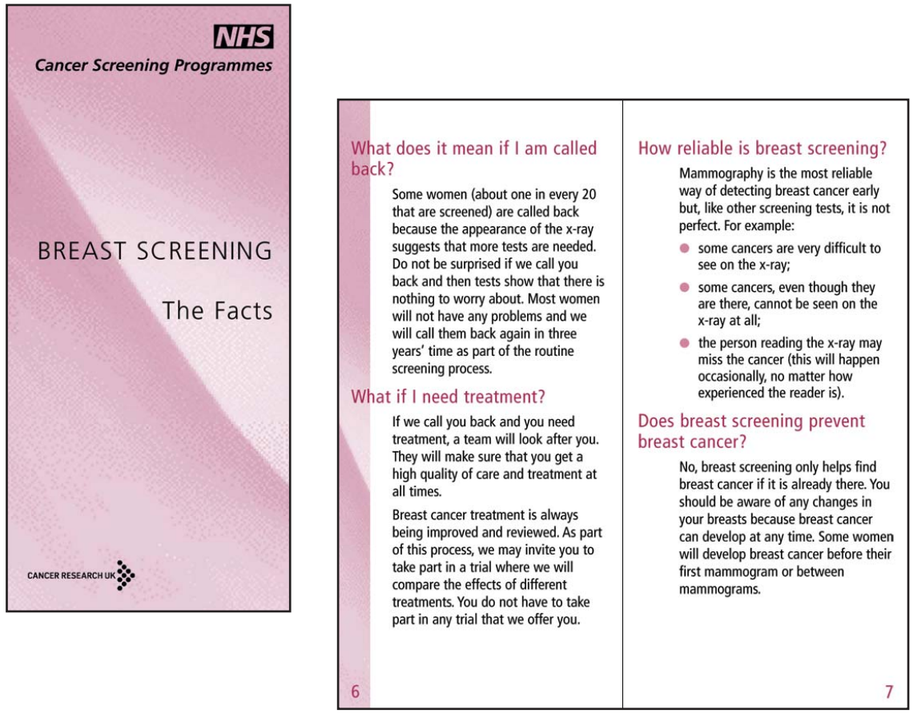
Readability calculations software
www.micropowerandlight.com

Write simply and clearly.

- Reading level should be appropriate for your intended audience, but in general, all materials should be written at no higher than a 6th grade level.
- Use the active voice. For example, "Most women participate in mammography screening" rather than, "Participation in mammography screening is high among women."
- Vary your sentence length, but keep most sentences short (8-10 words).

- Provide actions to take, not just facts. Most people want to know what to do. For example, "Call today to make an appointment."
- Limit the number of points you cover.
- Change abstract words to concrete words whenever possible. Concrete words are ones that you can visualize. Try to use plain language instead of scientific terms. If you must use a scientific term, define it in simple language. For example, use the word "normal" instead of "negative" if the results of a screening test show no cancer is present. Use the word "abnormal" instead of "positive" if the results show a possible cancer or other abnormality.
- Use familiar language, examples, personal experiences, and characters with whom the audience can relate.

This brochure from the U.K.'s National Health Service shows how to put these tips into action:



National Health Service Center Screening Programmes. London. www.cancerscreeing.nhs.uk/breastscreen/publications/ia-02.html

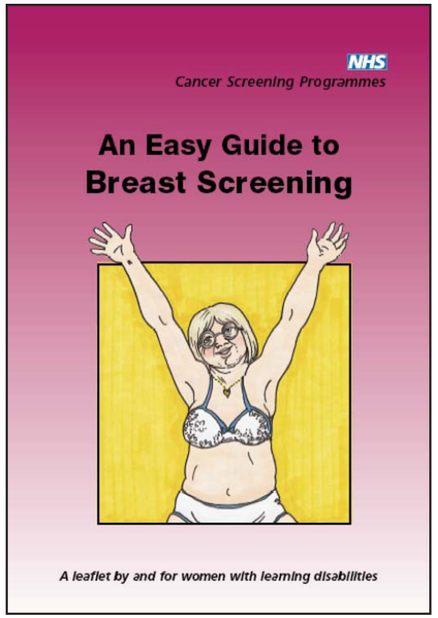
Write with your audiences in mind. Remember, your objective is to produce a brochure or letter that will be clear, appealing, and motivating to your audiences. If you can achieve this objective, you will enhance the likelihood that participation in your screening program will increase. Keeping your audiences in mind as you write means targeting and tailoring your content and the way it is presented to the groups and individuals in your intended audiences. Go back to **Worksheet 1.1** and jot down some of the techniques you'll use to target and tailor your materials. Table 3.6 carries forward our examples from earlier chapters to show you what we mean by keeping your audience in mind, both in terms of content and presentation. The examples that follow the table provide illustrations. The UK's National Health Service brochure (page 63) is targeted to women with learning disabilities and Group Health's (USA) breast screening program shows how a letter can be tailored to a returning screening participant (page 64).

✓IT OUT!
See Chapter 2 for more on targeting and tailoring.

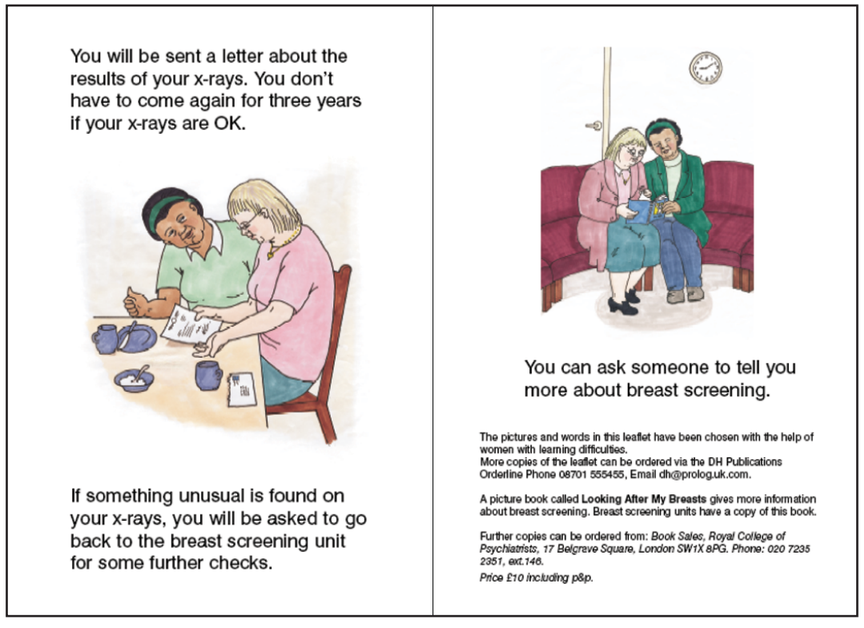
WORKSHEET1.1
A Planning Framework
Find it in Appendix 4.

Table 3.6 **A Planning Framework Example...Continued**

PURPOSE	OBJECTIVE	AUDIENCE	FORMAT	THEORY	MESSAGE	CONTENT	PRESENTATION
Encourage increased participation in active screening	By 2007,50% of patients in the intended audience will regard screening mammography as a beneficial and necessary component of their health care [Change attitudes]	Recent Asian immigrants, age 50-60	Brochure	Stages of Change	The benefits of screening mammo-graphy outweigh the risks.	- Information about breast cancer - Information about test process - Risks and benefits - Content targeted to audience and reflective of theory (e.g., focused on moving audience from contemplation to action)	- Text and visuals targeted to audience (e.g., culturally- and literacy-appropriate language, graphics, illustrations, and design)
Inform patient about need for additional testing	Patient will understand why further testing is necessary and will know how to obtain it [Increase knowledge]	Older woman with abnormal result on screening mammogram	Letter	Health Belief Model	You need follow-up testing.	- Results of exam - What the results might mean - Why follow-up is useful/necessary - Instructions on how to obtain follow-up testing - Content tailored to the audience and reflective of theory (e.g., sensitive to woman's perception of possible threat posed by results and her need for information about benefits that could results from taking action)	- Text tailored to recipient (e.g., larger font size, language appropriate to recipient's presumed reading level)



National Health Service Center Screening Programmes. London. www.cancerscreeing.nhs.uk/breastscreen/publications/easy-guide-breast-screening.html



«DATE» **ID Number «CONSUMER»**

«FIRST_NAME» «MIDDLE_INITIAL» «LAST_NAME»
«RES_ADDR_1»
«RES_ADDR_2»
«RES_CITY», «RES_STATE» «RES_ZIP»

It is time to schedule your screening mammogram by calling any of the Breast Centers listed below. If you have already scheduled then please disregard this reminder.

Our records indicate that your last mammogram was on «LAST_MAM_EXAM». On the basis of the following, we remind you to have a mammogram every two years.

«RISK_FACTOR1» «RISK_FACTOR2»

If this information needs to be updated or if you would like to be permanently removed from receiving letters for personal reasons, call the Screening Information Line at 206-326-3430 or 1-800-442-8925.

When making an appointment, please let the scheduler know:
* If you have breast implants
* If you have special needs (i.e., you are in a wheelchair or need an interpreter)
* If you have had a mammogram outside of Group Health
* If you have concerns about your breasts or think mammography is medically not appropriate for you (you will be asked to contact your personal primary care physician before scheduling your mammogram).

Use the following to schedule your appointment at the Breast Center of your choice:
(See the enclosed brochure for maps and visit information.)

Seattle (Capitol Hill) 206-326-3939 or 1-800-562-6300 x 3939	Redmond (Eastside) 425-883-5723 or 1-800-995-5658 x 5723	Everett 425-261-1541 or 1-800-422-2844 x 1541
Tacoma 253-596-3480 or 1-800-858-9996 x 690-3480	Olympia 360-923-7645 or 1-800-565-1393 x 650-7645	Silverdale 360-307-7555 or 1-800-645-6605 x 380-7555

Sincerely,

Group Health. Breast Cancer Screening Program. Seattle Washington. www.ghc.org

Make your headers work hard. Good, clear headers are important guideposts that your audience can use to trace key points through the text. Use them to your advantage.

Keep your paragraphs short. Short paragraphs are more inviting and easier to read than long paragraphs and they allow for more topic sentences to guide the reader through your material. This example from the Norwegian Breast Cancer Screening Programme shows the effective use of strong headers and short paragraphs.

TIP!
Each of the bolded sentences in this section essentially functions as a topic sentence.

Hvorfor bør du gå til mammografi?

Brystkreft er den hyppigste kreftformen blant kvinner i Norge. Forutsatt normal levealder, vil omtrent hver tiende kvinne utvikle brystkreft i løpet av livet. Regelmessig mammografi er i dag den beste metoden for å oppdage svulster i et tidlig stadium. Det gir bedre leveutsikter og større muligheter for å unngå fjerning av brystet.

"Tidlig diagnose, enklere behandling, bedre leveutsikter"

Hvem blir invitert til mammografi?

Åtte av ti tilfeller av brystkreft blir diagnostisert hos kvinner over 50 år. Vi inviterer alle kvinner mellom 50-69 år til mammografi. Etter anbefalinger fra internasjonale helsemyndigheter vil dette bli gjort annethvert år. Resultater fra de fem første årene med offentlig mammografi i Norge viser at fire av fem inviterte benyttet seg av tilbudet.

Hvor sikker er mammografi?

Mammografi avdekker ikke alle forandringer i brystene. Brystkreft kan også oppdages i tiden mellom undersøkelsene. Du bør derfor regelmessig undersøke brystene dine selv. Oppdager du forandringer, må du kontakte lege og eventuelt bli henvist til nærmeste brystdiagnostiske senter.

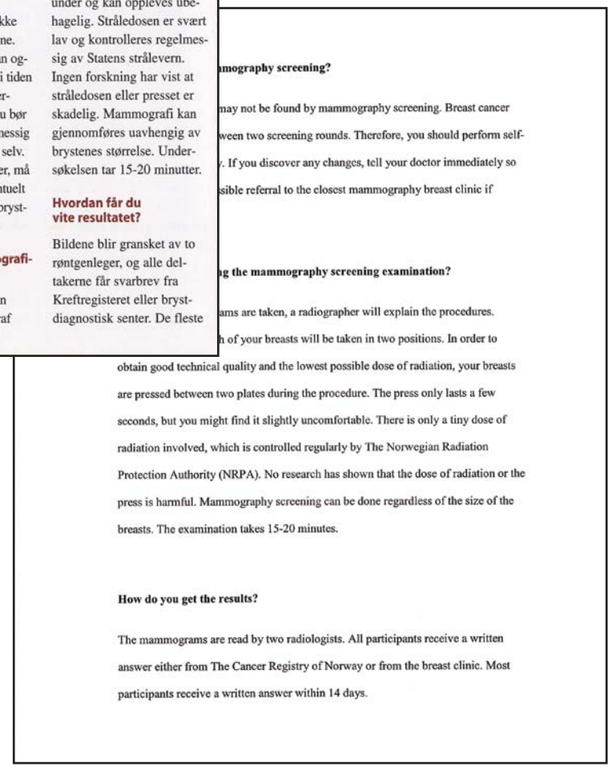
Hva skjer ved mammografiundersøkelsen?

Før bildene tas får du en samtale med en radiograf som forklarer deg hva som skal skje. Det tas mammografibilder i to posisjoner av hvert bryst. For å oppnå god bildekvalitet og lavest mulig stråledose, må det legges press på brystene når bildene tas. Presset varer noen sekunder og kan oppleves ubehagelig. Stråledosen er svært lav og kontrolleres regelmessig av Statens strålevern. Ingen forskning har vist at stråledosen eller presset er skadelig. Mammografi kan gjennomføres uavhengig av brystenes størrelse. Undersøkelsen tar 15-20 minutter.

Hvordan får du vite resultatet?

Bildene blir gransket av to røntgenleger, og alle deltakerne får svarbrev fra Kreftregisteret eller brystdiagnostisk senter. De fleste

The Cancer Registry of Norway. Olso, Norway: www.kreftregisteret.no



mmography screening?

may not be found by mammography screening. Breast cancer
ween two screening rounds. Therefore, you should perform self-
. If you discover any changes, tell your doctor immediately so
sible referral to the closest mammography breast clinic if

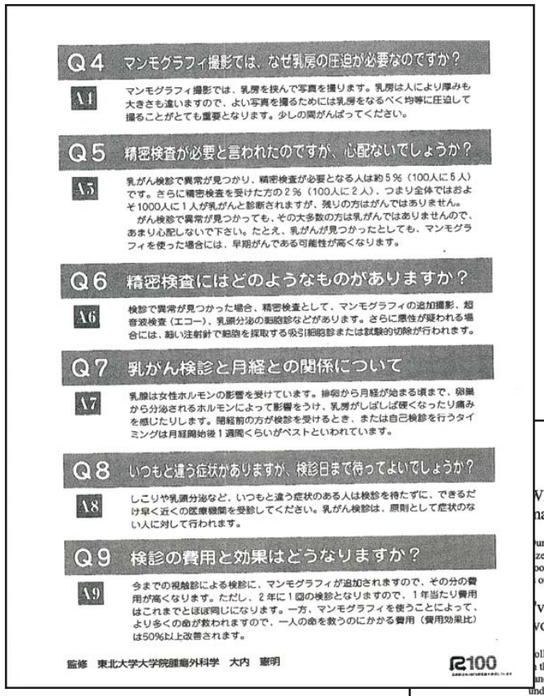
g the mammography screening examination?

ams are taken, a radiographer will explain the procedures.
h of your breasts will be taken in two positions. In order to obtain good technical quality and the lowest possible dose of radiation, your breasts are pressed between two plates during the procedure. The press only lasts a few seconds, but you might find it slightly uncomfortable. There is only a tiny dose of radiation involved, which is controlled regularly by The Norwegian Radiation Protection Authority (NRPA). No research has shown that the dose of radiation or the press is harmful. Mammography screening can be done regardless of the size of the breasts. The examination takes 15-20 minutes.

How do you get the results?

The mammograms are read by two radiologists. All participants receive a written answer either from The Cancer Registry of Norway or from the breast clinic. Most participants receive a written answer within 14 days.

Consider using a Question & Answer format. This can be a good way to break up text, highlight key concepts, and make your text accessible to readers. Use what you know about your audience and their information needs to frame the questions in ways that will feel realistic to your audience. Here's a Q&A example from Japan.



Q4 マンモグラフィ撮影では、なぜ乳房の圧迫が必要なのですか？

A4 マンモグラフィ撮影では、乳房を挟んで写真を撮ります。乳房は人により厚みも大きさも違いますので、よい写真を撮るためには乳房をなるべく均等に圧迫して撮ることがとても重要となります。少しの間がんばってください。

Q5 精密検査が必要と言われたのですが、心配ないでしょうか？

A5 乳がん検診で異常が見つかり、精密検査が必要となる人は約5％（100人に5人）です。さらに精密検査を受けた方の2％（100人に2人）、つまり全体ではおよそ1000人に1人が乳がんと診断されますが、残りの方はがんではありません。
がん検診で異常が見つかっても、その大多数の方は乳がんではありませんので、あまり心配しないで下さい。たとえ、乳がんが見つかったとしても、マンモグラフィを使った場合には、早期がんである可能性が高くなります。

Q6 精密検査にはどのようなものがありますか？

A6 検診で異常が見つかった場合、精密検査として、マンモグラフィの追加撮影、超音波検査（エコー）、乳頭分泌の細胞診などがあります。さらに悪性が疑われる場合には、細い注射針で細胞を採取する吸引細胞診または試験的切除が行われます。

Q7 乳がん検診と月経との関係について

A7 乳腺は女性ホルモンの影響を受けています。排卵から月経が始まる頃まで、卵巣から分泌されるホルモンによって影響をうけ、乳房がしばしば硬くなったり痛みを感じたりします。閉経前の方が検診を受けるとき、または自己検診を行うタイミングは月経開始後1週間くらいがベストといわれています。

Q8 いつもと違う症状がありますが、検診日まで待ってよいでしょうか？

A8 しこりや乳頭分泌など、いつもと違う症状のある人は検診を待たずに、できるだけ早く近くの医療機関を受診してください。乳がん検診は、原則として症状のない人に対して行われます。

Q9 検診の費用と効果はどうなりますか？

A9 今までの視触診による検診に、マンモグラフィが追加されますので、その分の費用が高くなります。ただし、2年に1回の検診となりますので、1年当たり費用はこれまでとほぼ同じになります。一方、マンモグラフィを使うことによって、より多くの命が救われますので、一人の命を救うのにかかる費用（費用効果比）は50%以上改善されます。

監修　東北大学大学院腫瘍外科学　大内　憲明

R100

Why is it necessary to compress the breast during a mammogram?

During a mammogram, the breast is held in place and "photographed." The size and thickness of breasts varies from person to person, and in order to get a good image, it is important to compress the breast as uniformly as possible. It is only for a short while, and we know you can handle it.

I've been told I need more tests. Should I be worried?

Follow-up testing is required for about 5% of patients (5 out of 100 persons), in those cases when an abnormality is detected during initial testing for breast cancer. Breast cancer is found in 2% (2 out of 100 persons) of those who undergo further tests, or, in other words, only in about 1 out of 1000 of all the patients who undergo initial testing; the others do not have cancer.
Even if an abnormality is discovered during testing for cancer, in most cases, the abnormality is not breast cancer, so you shouldn't worry too much. What's more, when mammography is used, even if breast cancer is detected, the odds are that it will turn out to be early stage breast cancer.

Q6 What kinds of follow-up tests are used?

A6 If an abnormality is found during initial testing, follow-up tests may include additional mammograms, echo imaging, and biopsy (cytodiagnosis) of breast secretions. If a malignancy is suspected, doctors may perform an aspiration (needle) biopsy, in which a fine needle is used to collect cells, or an exploratory excision.

Q7 What is the relationship between breast cancer and menstruation?

A7 The breasts are affected by female hormones. From ovulation until the menses (bleeding) starts, the ovaries secrete hormones that affect the breasts, and the breasts often get harder and more sensitive. The best time for examining pre-menopausal women, and the best time for breast self-examination, is said to be about one week before the menses.

Q8 I've noticed something different than usual. Should I wait for my next examination?

National Cancer Center. Toyko, Japan. www.ncc.go.jp

Emphasize important points without distracting from the readability.

- Use underline or **bold** rather than *italics* or all CAPS for emphasis.
- Use bullets to break up text. Try to use no more than five items in a bulleted list.
- Place key points first and last on a list. This is where the reader will best see and remember them.

Write about one concept at a time. Skipping back and forth between concepts can be confusing.

Consider incorporating informed decision making concepts. Including concepts that promote IDM can influence written materials in two ways:

- First, they can help you decide what specific information you want to include in your written materials.
- Second, they may influence how you present this information. For instance, you may exclude or downplay the diagnosis of clinically unimportant cancers such as *ductal carcinoma in situ* (DCIS) that may not develop into invasive cancer, or you may decide that it is helpful to women to convey risk information using a personal narrative because it will help them identify their own personal values concerning this information.

✓ IT OUT!
For more on informed decision making, see Bekker et al. Informed decision making: An annotated bibliography and systematic review. *Health Technology Assessment* 1999;3(1):1-156.

Frame the information in culturally appropriate ways.

- Acknowledge culture as a predominant force in shaping behaviors, values, and institutions.

- Understand and reflect the diversity within cultures. In designing messages that are culturally appropriate, the following dimensions are important:
  - —*Primary cultural factors* linked to race, ethnicity, language, nationality, and religion
  - —*Secondary cultural factors* linked to age, gender, sexual orientation, educational level, occupation, income level, and acculturation to the mainstream culture

- Reflect and respect the attitudes and values of the intended audience; some examples of attitudes and values that are interrelated with culture include:
  - —Whether the individual or the community is of primary importance
  - —Accepted roles of men, women, and children
  - —Preferred family structure (nuclear or extended)

Consider carefully the way in which you discuss the risks and benefits of screening

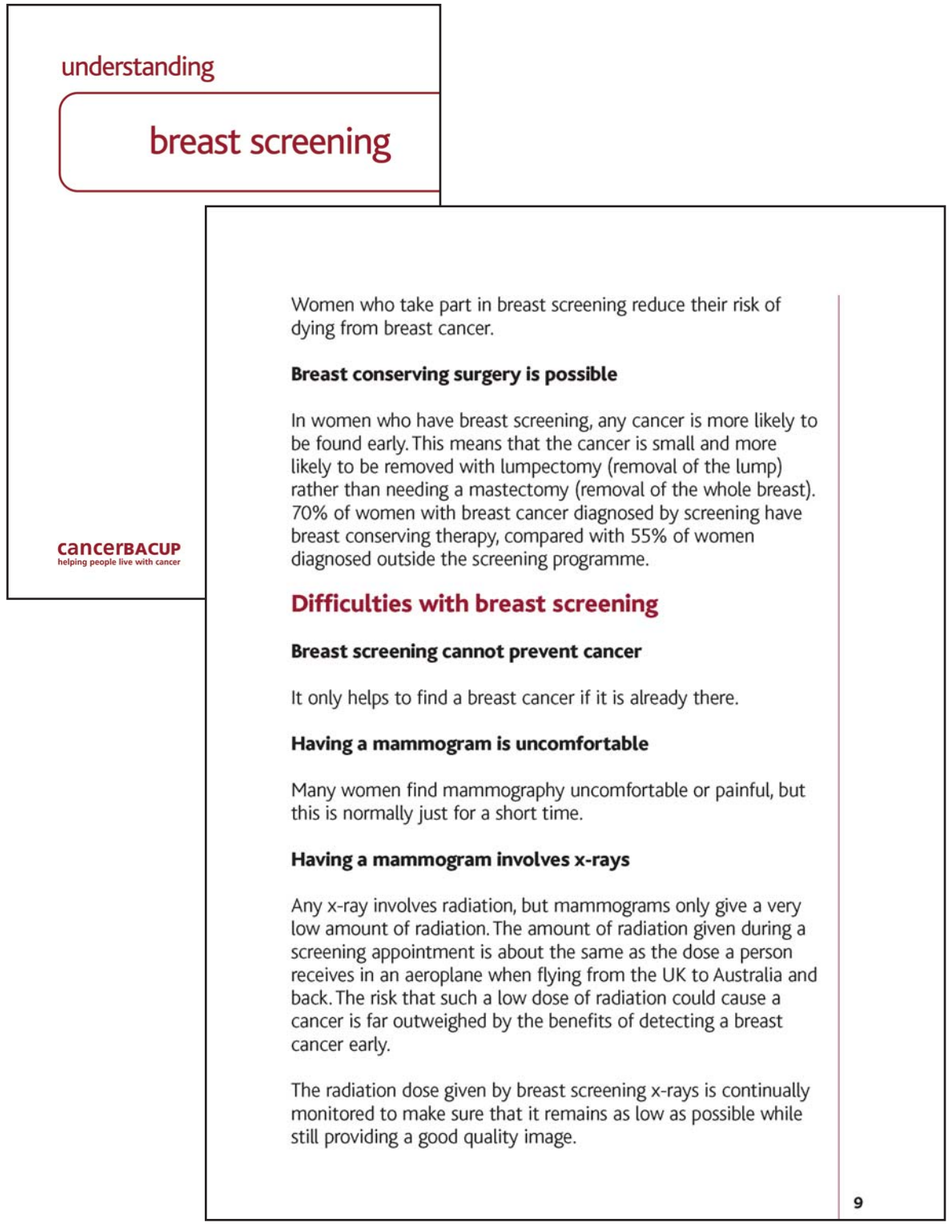
Most health professionals agree that risk and benefit information is important to convey because the quality and extent of this information can dramatically change people's willingness to participate in testing. A fundamental goal of health risk communication, therefore, is to help people better understand the important health risks they face and possible benefits from a medical intervention such as screening. Research has shown that patients who received more risk information from their health care provider were more satisfied and had higher compliance with medical regimens than were patients who received less risk information.

Mammography screening has many benefits and some risks, and much of what we communicate to women in our brochures and letters is about this topic. Little empirical evidence exists to guide us on what information is most important to include when educating women about risks and benefits of mammography screening or how to present the information in an understandable fashion. Here are a few recommendations based on the literature, theory, and practical considerations.

Discuss the terms. "Benefit" is defined as something that promotes well-being, and "risk" is defined as the probability or chance of experiencing some harm as a consequence of a disease or a test for a disease. Breast cancer screening may include several different potential risks, including the risk of:

- Getting cancer;
- The screening test not detecting cancer;
- Unnecessary treatment following a false positive test;
- The fear of a cancer diagnosis, which seems on its face to be paradoxical but studies have shown that this can be a deterrent to screening; and
- Being diagnosed with a clinically unimportant cancer or of invasive cancer in a seriously ill woman who is likely to die of something else before she dies of breast cancer.

In determining how to discuss benefits and risks of participating in mammography screening, the first thing you need to consider is what content to include. This will depend upon whether you are trying to persuade women to participate in screening or whether you are providing them with information for IDM. The example on page 69, from the UK's National Health Service, is a brochure that discusses this issue in a clear and understandable fashion.



understanding

breast screening

cancerBACUP
helping people live with cancer

Women who take part in breast screening reduce their risk of dying from breast cancer.

Breast conserving surgery is possible

In women who have breast screening, any cancer is more likely to be found early. This means that the cancer is small and more likely to be removed with lumpectomy (removal of the lump) rather than needing a mastectomy (removal of the whole breast). 70% of women with breast cancer diagnosed by screening have breast conserving therapy, compared with 55% of women diagnosed outside the screening programme.

Difficulties with breast screening

Breast screening cannot prevent cancer

It only helps to find a breast cancer if it is already there.

Having a mammogram is uncomfortable

Many women find mammography uncomfortable or painful, but this is normally just for a short time.

Having a mammogram involves x-rays

Any x-ray involves radiation, but mammograms only give a very low amount of radiation. The amount of radiation given during a screening appointment is about the same as the dose a person receives in an aeroplane when flying from the UK to Australia and back. The risk that such a low dose of radiation could cause a cancer is far outweighed by the benefits of detecting a breast cancer early.

The radiation dose given by breast screening x-rays is continually monitored to make sure that it remains as low as possible while still providing a good quality image.

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National Health Service Cancer Screening Programmes, in association with Cancerbacup. London. www.cancerscreening.nhs.uk/breastscreen/publications/understanding-breast-screening.pdf

If you want to persuade women to participate, you need to think about whether to frame your messages with content that increases the participants' perception of risk or with content that increases the participants' perception of benefits. Communication theory calls this "loss or gain framing." Loss framing increases the perception of risk (as in the Health Belief Model) by explaining all the things one will lose if one does not participate in screening. If you present information as a gain frame then you emphasize the advantages or benefits gained from participating in mammography screening.

IT OUT!
For more on using loss and gain framing in screening information, see Abood et al., 2002 and Banks et al., 1995.

Example of loss framing. An example of a "risk" of failing to get a mammogram might be the risk of being diagnosed at a late stage, thereby lowering the chances of surviving breast cancer.

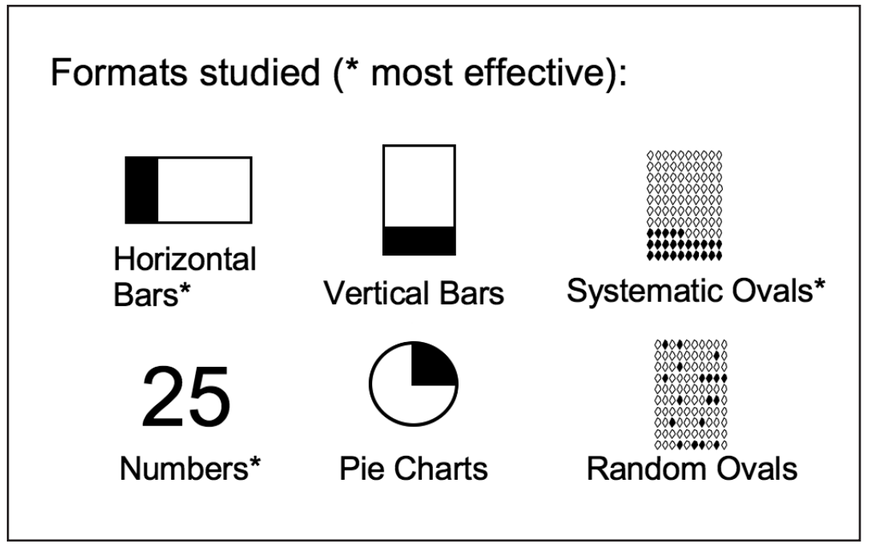
Example of gain framing. Examples of "benefits" of participating in screening are gaining peace of mind or ensuring early detection, which can lead to less treatment and better survival if cancer is found.

A few studies have shown that women are more persuaded to participate in screening mammography if the information is presented as a loss frame—emphasizing the problems that arise from not participating. For other health promoting behaviors, gain framing appears more effective.

If you want your materials to include the principles of IDM, then you would include a balance of both loss and gain framed information and allow the audience to decide how to use the information.

Use numbers to explain risk and benefit. People, including many highly educated people, are often intimidated by numbers and have trouble understanding risk communications because risk and benefits are frequently explained through numerical concepts. It is your job, therefore, to make this information as easy to understand as possible. Here are some hints for using numbers to explain risk and benefit:

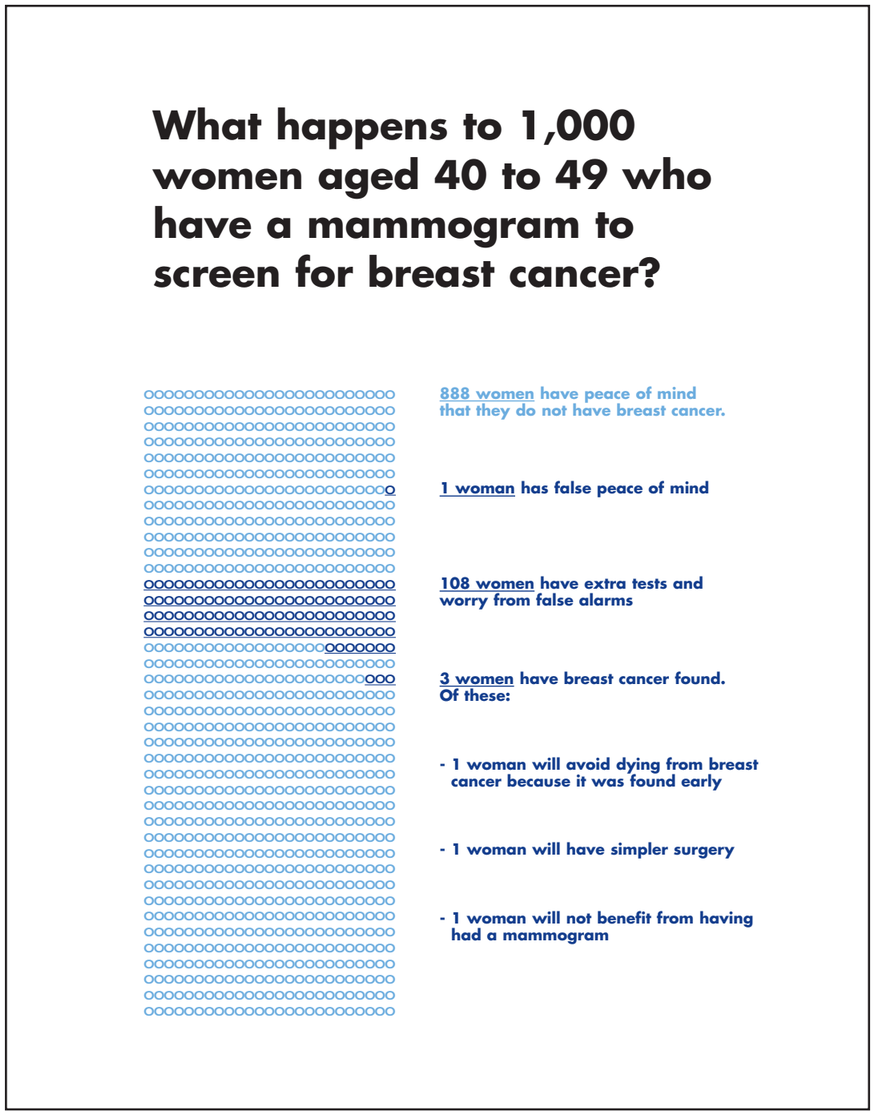
- **Use visual aids.** Some preliminary research has shown that presenting quantitative information using either numbers or systematic ovals leads readers to the most accurate understanding. As the following illustration shows, using random ovals and pie charts leads to the most errors, although taking one slice out of a pie chart makes it easier to understand. Horizontal bars are effective when comparing groups.



Adapted from Feldman-Stewart D et al. Further insight into quantitative information for treatment decisions. Medical Decision Making. In Press, 2006.

- **Use as small a denominator as possible without losing the meaning of the numbers.** One qualitative and one quantitative study found that the smaller the denominator, the easier it is to understand. When a large denominator is used to report the probability of an event, people think that the event is more likely to occur than if a small denominator is used. For example, if a certain condition causes a death rate of 1,286 in 10,000 (a probability of 0.1286), people incorrectly view these deaths as more likely to occur than if the condition caused a death rate of 24.14 out of 100 (in fact, a higher probability of 0.2414). To fix this problem, report both death rates in terms of deaths per 100 rather than deaths per 10,000. In that case, the death rates would be 12.86 in 100 versus 24.14 in 100, and then the comparison would be easier to understand.

- **Present probabilities as an "event rate," also known as a "natural frequency," using a constant denominator**. Probabilities are counts (a numerator) over a group of a standard size (a denominator). For example, the statement "9 of 100 women will get breast cancer in their lifetime" is a probability. If comparing more than one probability, use the same denominator for both. In the example on page 72, which uses systematic ovals, the denominator always is 1,000, and the numerator changes depending on what is being presented. It is much easier to compare two probabilities using the same denominator than using the same numerator (for example, 1 of 4 compared with 1 of 20).



Should I start having mammograms for breast cancer screening? A decision aid for women aged 40 to 49. Reprinted with permission from the Ottawa Health Decision Center, Ottawa, Canada and the Public Health Agency of Canada.

Here's an example checklist of the points covered in the preceeding section. Use the blank version in **Appendix 4** to help you write brochures and letters that are clear and easy to read.

Checklist 3.1 **A Writer's Checklist**

DID I...	MATERIAL #1	MATERIAL #2	MATERIAL #3	MATERIAL #4
Write down a list of key points				
Develop an outline				
Make sure my facts are accurate				
Write simply and clearly				
Write with my audiences in mind by targeting and tailoring my content and presentation				
Use strong topic sentences				
Write short paragraphs				
Use underline or bold instead of italics or caps				
Write about one concept at a time				
Consider incorporating IDM				
Consider my audience's cultural motivation				
Consider how to discuss risk and benefit				

Decide Whether To Translate Materials

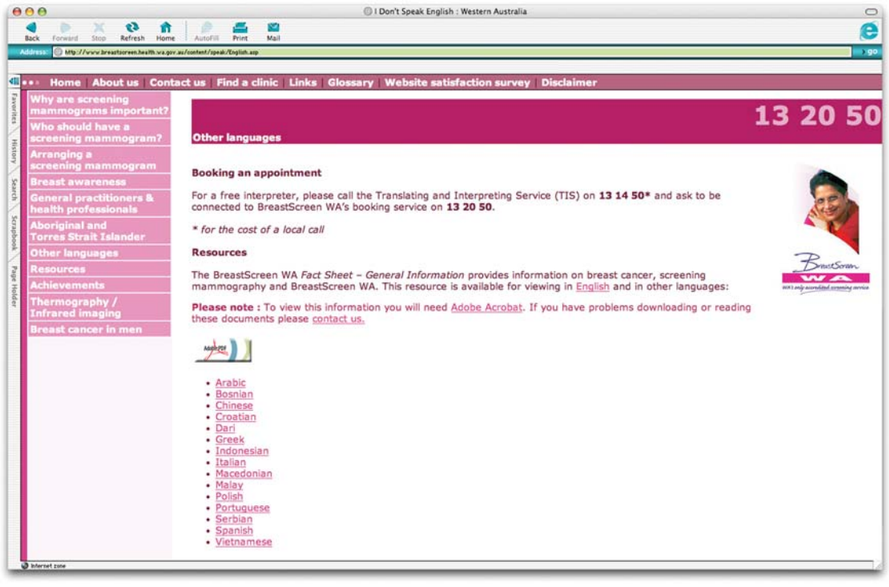
Many countries have populations that are eligible for screening but do not speak the native language of the country. It is always best to write materials for your intended audience in their own language, but you may decide at times to use materials written in your own language and then translate them into the language of your audience. Materials translated from the language of the original source materials into a target language need to be reliable, complete, accurate, and culturally appropriate. In addition to meeting these criteria, they also need to have semantic, conceptual, and normative equivalence:

- **Semantic equivalence** refers to the extent to which the terms and sentence structures that give meaning to the information presented in the source language is maintained in the translated text. Literal translations often do not convey the intended meaning or can even be offensive. For example, slogans and idioms frequently do not translate correctly.

- **Conceptual equivalence** concerns the degree to which a given concept is present in both the source and target cultures, regardless of the words used to express the concept.

- **Normative equivalence** refers to the extent to which the translated text successfully addresses the difficulties created by differences in societal rules between the source and target culture.

It used to be thought that once a document was translated into another language, translating it back to the original language was a valuable method to check the translation. This is no longer considered to be true. Therefore, it's best to ask at least two people fluent in both languages and who have been carefully briefed by project staff to review the brochure or letter to ensure that the meaning is intact after translation. Such an approach can ensure that the cross-cultural subtleties of meaning will be accommodated. Members of the creative team must work closely with translators to ensure that the translation addresses the meaning you truly want to convey. It's a good idea to involve community leaders and organizations from your intended audience in the development and translation of materials. They can help you select and instruct the translator. Field test the materials with people who speak both languages before putting the brochure or letter into final form. Several programs have placed a high priority on translating materials into multiple languages. Western Australia's breast cancer screening program's web site illustrates one country's commitment to translation.



Department of Public Health. Government of Western Australia. Perth, Australia. www.breastscreen.health.wa.gov.au/content/speak/English.asp

Develop Your Visual Presentation

Layout and visual display also are important ingredients to making communication tools effective and easy to use. Here are several suggestions for creating an inviting format.

Creating an Appealing Layout

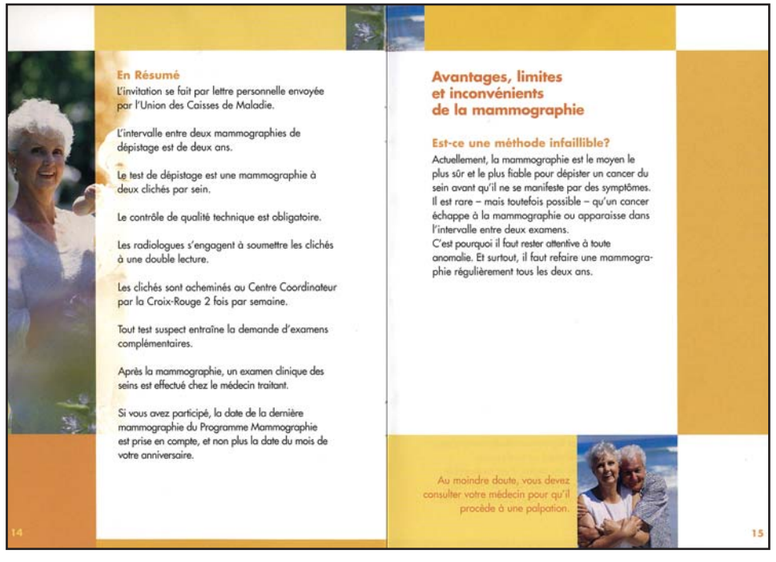
- Use "left justified, ragged right" margins (except in languages that are read from right to left, such as Arabic and Hebrew; in those cases, use "right justified, ragged left"). That means that every line begins at exactly the same place on the left and ends at different points on the right. Ragged right margins are easier to read than right justified because the eye uses the variations at the end of the lines to track down the page. In addition, with ragged right margins, all the spaces between letters and words are the same and that makes reading easier.

- Keep a lot of white space on the paper.

- Use small blocks of text, bullets, and graphic elements to break up your text. A solid page of text is uninviting.

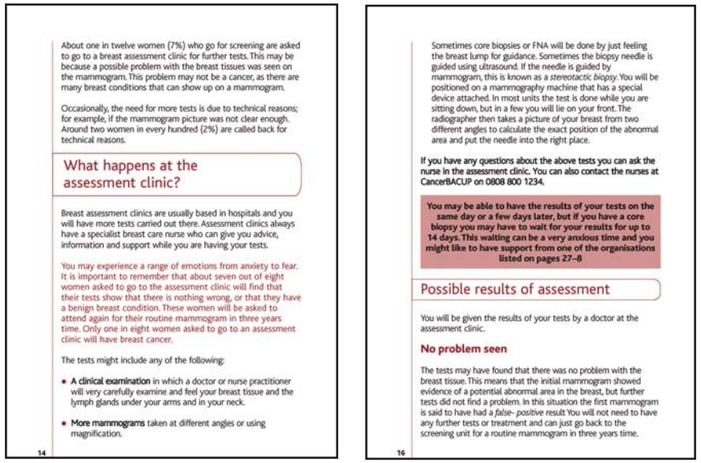
- Use highly contrasting colors for paper and ink so that the information is easy to read.

This example from Luxembourg illustrates the these tips:



Programme Mammographie. Ministry of Health. Luxembourg. www.mammographie.public.lu/publications/autres/brochureprogramme/index.html

You don't always need full color and photos to create an appealing layout. This example from the UK's National Health Service shows how to apply these principles using only graphic elements and two colors:



About one in twelve women (7%) who go for screening are asked to go to a breast assessment clinic for further tests. This may be because a possible problem with the breast tissues was seen on the mammogram. This problem may not be a cancer, as there are many breast conditions that can show up on a mammogram.

Occasionally, the need for more tests is due to technical reasons; for example, if the mammogram picture was not clear enough. Around two women in every hundred (2%) are called back for technical reasons.

What happens at the assessment clinic?

Breast assessment clinics are usually based in hospitals and you will have more tests carried out there. Assessment clinics always have a specialist breast care nurse who can give you advice, information and support while you are having your tests.

You may experience a range of emotions from anxiety to fear. It is important to remember that about seven out of eight women asked to go to the assessment clinic will find that their tests show that there is nothing wrong, or that they have a benign breast condition. These women will be asked to attend again for their routine mammogram in three years time. Only one in eight women asked to go to an assessment clinic will have breast cancer.

The tests might include any of the following:

- **A clinical examination** in which a doctor or nurse practitioner will very carefully examine and feel your breast tissue and the lymph glands under your arms and in your neck.
- **More mammograms** taken at different angles or using magnification.

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Sometimes core biopsies or FNA will be done by just feeling the breast lump for guidance. Sometimes the biopsy needle is guided using ultrasound. If the needle is guided by mammogram, this is known as a *stereotactic biopsy*. You will be positioned on a mammography machine that has a special device attached. In most units the test is done while you are sitting down, but in a few you will lie on your front. The radiographer then takes a picture of your breast from two different angles to calculate the exact position of the abnormal area and put the needle into the right place.

If you have any questions about the above tests you can ask the nurse in the assessment clinic. You can also contact the nurses at CancerBACUP on 0808 800 1234.

You may be able to have the results of your tests on the same day or a few days later, but if you have a core biopsy you may have to wait for your results for up to 14 days. This waiting can be a very anxious time and you might like to have support from one of the organisations listed on pages 27–8

Possible results of assessment

You will be given the results of your tests by a doctor at the assessment clinic.

No problem seen

The tests may have found that there was no problem with the breast tissue. This means that the initial mammogram showed evidence of a potential abnormal area in the breast, but further tests did not find a problem. In this situation the first mammogram is said to have had a *false- positive* result You will not need to have any further tests or treatment and can just go back to the screening unit for a routine mammogram in three years time.

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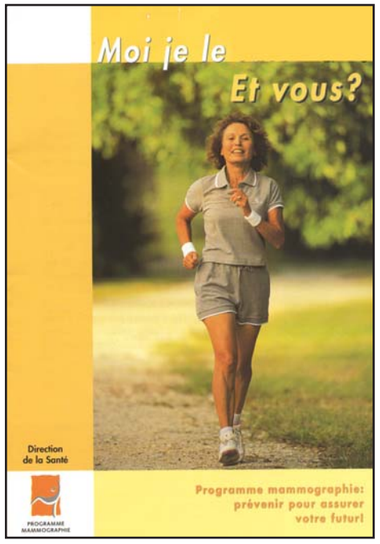
National Health Service Cancer Screening Programmes, in association with Cancerbacup. London. www.cancerscreening.nhs.uk/breastscreen/publications/understanding-breast-screening.pdf

- Design an effective cover, making it attractive to the intended audience and presenting the main message. The Luxembourg brochure shows one way to do this:



Programme Mammographie. Ministry of Health. Luxembourg. www.mammographie.public.lu/publications/autres/brochureprogramme/index.html

- Place the most important information at the beginning and end of the material.

- Use text boxes and sidebars to highlight key information or to separate out background information from other types of content. These devices also help to break up the text and provide visual interest. This Dutch brochure shows the effective use of sidebars and text boxes:

- een knobbeltje in de borst;
- een deukje of kuiltje in de huid van de borst;
- een plaatselijk verdikte huid;
- een tepel die sinds kort naar binnen trekt;
- bloederig vocht uit de tepel;
- veranderingen van de tepel;
- pijn op een plek waar de borst ook anders aanvoelt.

Neemt u bij bovengenoemde klachten altijd contact op met uw huisarts. Wacht niet op de volgende uitnodiging voor het bevolkingsonderzoek.

Uw gegevens

Om het onderzoek goed te kunnen uitvoeren, hebben wij uw gegevens nodig. Uw naam, adres en geboortedatum krijgen wij van de gemeente. Het dossier van uw persoonsgegevens en de uitslag van het onderzoek bewaren wij vijfentwintig jaar, de foto's vijftien jaar. Bij diagnostiek en behandeling wisselen de radioloog en het ziekenhuis gegevens uit op grond van het medebehandelaarsschap. Uw gegevens gaan ook naar de kankerregistratie van het regionale Integraal Kankercentrum (IKC) en het pathologisch basisbestand (Palga). In deze registratie staan alle gevallen van borstkanker vermeld. Door de gegevens van het bevolkingsonderzoek hiermee te vergelijken, kan men nagaan welke gevallen van borstkanker binnen twee jaar na het bevolkingsonderzoek in het ziekenhuis zijn vastgesteld. Door deze uitwisseling van gegevens is het mogelijk het effect van het bevolkingsonderzoek op lange termijn te meten. Om vast te stellen of het bevolkingsonderzoek tot daling van de sterfte aan borstkanker heeft geleid, worden de gegevens van het bevolkingsonderzoek ook met die van het Centraal Bureau voor de Statistiek (CBS) vergeleken. Als u bezwaar heeft tegen het gebruik van uw gegevens bij de vergelijking van de gegevens van de kankerregistratie, Palga en het CBS, kunt u een bezwaarschrift indienen. Dit bezwaarschrift is te verkrijgen bij het onderzoekscentrum. Met uw gegevens wordt uiterst zorgvuldig omgegaan. De regels voor registratie liggen vast in het privacyreglement. Het reglement ligt ter inzage in het onderzoekscentrum. Op de registratie van uw gegevens is de Wet bescherming persoonsgegevens van toepassing.

Opmerkingen, klachten of vragen?

Uw reactie, suggesties of klachten kunt u aan ons doorgeven. In het onderzoekscentrum is hiervoor een formulier verkrijgbaar. De screeningsorganisatie beschikt over een formele klachtenprocedure.

Organisaties

Het bevolkingsonderzoek borstkanker wordt in Nederland uitgevoerd door de volgende organisaties:

Stichting Bevolkingsonderzoek Borstkanker Noord-Nederland (BBNN)
Postbus 425, 9700 AK Groningen, T (050) 520 88 88

Stichting Bevolkingsonderzoek Borstkanker West-Nederland (BoB West)
Schipholweg 5a, 2316 XB Leiden, T (071) 525 97 99

Stichting Bevolkingsonderzoek Borstkanker Zuid (BoBZ)
Postbus 1456, 5200 BM 's-Hertogenbosch, T (073) 646 45 11

Stichting Prevendoc
Stationsplein 91, 3511 ED Utrecht, T (030) 231 36 84

Stichting Bevolkingsonderzoek Borstkanker Zuidwest Nederland (BBBZWN)
Postbus 209, 3000 AG Rotterdam, T (0180) 47 05 05

Stichting Kankerpreventie IKA (BKP IKA)
Postbus 9236, 1006 AE Amsterdam

Stichting Kankerpreventie en -screening Limburg (BKsL)
Postbus 2308, 6201 HA Maastricht, T (043) 325 40 59

Stichting Vroege Opsporing Kanker Oost-Nederland (BVOKON)
Hatertseweg 1, 6533 AA Nijmegen, T (024) 356 62 63

Stichting Vroege Opsporing Borstkanker (BVOB)
Stadsport, Piet Heinstraat 16, 7511JE Enschede

Voor meer informatie kunt u terecht op:
www.bevolkingsonderzoekborstkanker.nl
www.borstfoto.nl

December 2005. Dit is een publicatie van het RIVM, Rijksinstituut voor Volksgezondheid en Milieu
www.rivm.nl

rivm

Bevolkingsonderzoek Borstkanker

Alle vrouwen van 50 tot en met 75 jaar krijgen iedere twee jaar een uitnodiging voor het bevolkingsonderzoek borstkanker. Het doel van dit onderzoek is de sterfte aan borstkanker te verlagen. Deelname aan het bevolkingsonderzoek is gratis en geheel vrijwillig.

wat u moet weten

rivm

Waarom een bevolkingsonderzoek?

Borstkanker is de meest voorkomende vorm van kanker in Nederland. Per jaar wordt er bij ruim 11.000 vrouwen borstkanker vastgesteld. Één op de negen vrouwen krijgt in haar leven borstkanker. Van deze vrouwen is 75% ouder dan 50 jaar. Borstkanker kan worden opgespoord met behulp van röntgenfoto's van de borsten. Deze kunnen afwijkingen zichtbaar maken die anders of met het betasten van de borst nog niet op te merken zijn. Ontdekking van borstkanker in een vroeg stadium maakt de kans op genezing groter. Er kan dan mogelijk een borstsparende behandeling plaatsvinden.

Voor wie is het onderzoek bedoeld?

Het bevolkingsonderzoek borstkanker is bedoeld voor vrouwen van 50 tot en met 75 jaar die géén klachten aan de borsten hebben. Afhankelijk van de route van het onderzoekscentrum ontvangt u de eerste uitnodiging in het jaar dat u 50, 51 of 52 wordt. In het jaar dat u 76 wordt, ontvangt u geen uitnodiging meer. Het in een vroeg stadium opsporen van borstkanker, door middel van röntgenfoto's, is juist voor vrouwen in deze leeftijdsgroep zinvol om de sterfte aan borstkanker te verlagen. Bij vrouwen die deelnemen aan het bevolkingsonderzoek worden twee van de drie aanwezige gevallen van borstkanker ontdekt.

Deelname is niet nodig indien u:

- onder controle of behandeling bent voor klachten aan uw borsten;
- in de laatste zes maanden röntgenfoto's van uw borsten heeft laten maken.

Hoe verloopt het onderzoek?

Als u het onderzoekscentrum binnenkomt meldt u zich bij de balie. Zodra u aan de beurt bent, gaat u naar de kleedkamer, waar u zich van boven uitkleedt. Vervolgens worden er in de onderzoekruimte röntgenfoto's van uw borsten gemaakt. De laborante legt uw borst op een steunplaat en drukt de borst aan met een andere plaat. Voor het maken van een goede foto is dit nodig. Het kan echter gevoelig of pijnlijk zijn. Als het aandrukken te gevoelig wordt, kunt u dit tegen de laborante zeggen. Zij kan daar dan zo veel mogelijk rekening mee houden. Het fotograferen van de andere borst gebeurt op dezelfde manier. Na elke cliënte worden de platen schoongemaakt. De laborante maakt één of meerdere foto's per borst. Dit is onder andere afhankelijk van de omvang van de borst en de hoeveelheid klierweefsel. Ook bij prothese zijn meerdere foto's nodig. Het totale onderzoek duurt ongeveer twintig minuten. Voor het maken van de röntgenfoto's is heel weinig röntgenstraling nodig.

Na het onderzoek

Na het onderzoek kunt u zich aankleden en weer plaatsnemen in de wachtkamer. De laborante komt u melden of de foto's gelukt zijn of dat er foto's bijgemaakt moeten worden. Het kan dus voorkomen dat u uit de wachtkamer wordt opgehaald voor extra foto's. De laborante kan u niets zeggen over de uitslag van het onderzoek, omdat pas daarna twee radiologen de foto's gaan beoordelen.

Tips voor het onderzoek

- Draag gemakkelijke bovenkleding in verband met aan- en uitkleden.
- Gebruik geen zalf, poeder of bodylotion op uw borsten voor het onderzoek.
- Houd u zich aan de afgesproken datum en tijd.
- Houdt er rekening mee dat er in het mobiele onderzoekscentrum geen toilet aanwezig is.

De uitslag van het onderzoek

U krijgt de uitslag van het bevolkingsonderzoek binnen twee weken toegestuurd.

De beoordeling van het onderzoek

Twee radiologen beoordelen de foto's. Deze artsen zijn gespecialiseerd in röntgenonderzoek. De radiologen bekijken de foto's onafhankelijk van elkaar. Er wordt gekeken naar afwijkingen die kunnen wijzen op de aanwezigheid van borstkanker. Als u eerder heeft deelgenomen, vergelijken zij de nieuwe foto's met die van de vorige onderzoeken. Bij inwendige borstprotheses en bij veel klierweefsel in de borst is beoordeling van de foto minder goed mogelijk. Meer informatie over de beoordeling van de foto's bij inwendige borstprotheses is telefonisch aan te vragen en verkrijgbaar bij het onderzoekscentrum.

De röntgenfoto's van de meeste vrouwen laten geen afwijking zien waarvoor verder onderzoek nodig is. Bevindingen met goedaardige kenmerken, bijvoorbeeld cysten (vochtblaasjes), worden niet aan u of de huisarts gemeld. Bij één op de honderd onderzochte vrouwen wordt een afwijking gevonden die verder onderzocht moet worden. De huisarts krijgt de uitslag van het onderzoek, en u kunt deze met hem of haar bespreken. Hierop volgt een doorverwijzing naar een specialist voor nader onderzoek. Ongeveer 60% van de gevonden afwijkingen blijkt na verder onderzoek goedaardig te zijn.

Geen garantie

Bij vrouwen die deelnemen aan het bevolkingsonderzoek wordt één van de drie aanwezige gevallen van borstkanker niet ontdekt. Het bevolkingsonderzoek kan u dus geen volledige zekerheid geven.

Het komt voor dat borstkanker nog niet, moeilijk, of helemaal niet op de röntgenfoto te zien is. Een enkele keer is op de röntgenfoto een minimale afwijking te zien die goedaardig lijkt, maar later toch borstkanker blijkt te zijn.

Het is raadzaam dat u blijft letten op veranderingen aan uw borsten die kunnen wijzen op borstkanker, zoals:

Bevolkingsonderzoek Borstkanker Nederland. The Netherlands. www.bevolkingsonderzoekborstkanker.nl/extra/Algemeen/RIVM_050912_borst_P.pdf

TIP!
We chose the one-column format for this guide.

- It is difficult to read long lines of text. Therefore, consider breaking up text into two or three columns. If you decide to use a one-column format, create an extra-wide left or right margin so that your column fills no more than about two-thirds of the page.

- Avoid vertical alignment of letters or reverse lettering because this is hard to read.

TIP!
This sentence is written in Arial, a sans serif font.

This sentence is written in Times New Roman, a serif font.

- Help readers by using easily readable type that is 12-14 points in size. People disagree about whether to use serif or sans serif fonts. Before making a final decision about your font, test it with your audience.

- Make sure that the fonts you choose for the various levels of headers are clearly distinguishable from each other and consistent throughout your text.

Using the Right Pictures

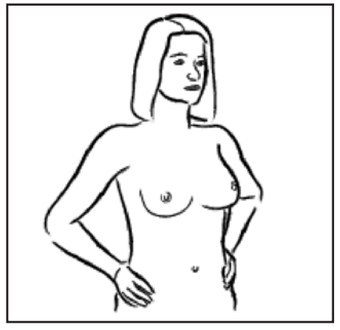
Pictures are worth 1,000 words. Drawings or photographs of the screening clinic, screening test, and people from the intended audience can be comforting to your audience, especially if they have never been screened before. Descriptions of the incidence of disease, chance of preventing the disease with screening, and other risk communications are greatly enhanced with the use of visuals. Below are some general guidelines for using visuals:

- Show pictures of only what you want people to do. People remember pictures, so do not show any behaviors that are not relevant to your messages.

- Convey your message in a caption under the picture when appropriate.

- Don't use graphics to decorate the page. This can be distracting and make words difficult to see.

- Use only professional, adult-looking visuals. As this picture shows, when illustrating body parts, it's a good idea to put them in the context of the body.



Another important type of picture to consider is a visual image or logo to represent your program. Logos help people identify the materials from your program at a glance. Test a few different images with a variety of people from the intended audience before choosing the final image. Here are examples of logos from the Swiss Fondation Pour le Dépistage du Cancer du Sein and Canada's Nova Scotia Breast Screening Program.

Pretest Your Final Materials

Once you have completed drafting your brochures and letters and developing your visuals and layout materials, you need to do one final pretest with both the intended audience and the gatekeepers. Use the same pretest methods that you used earlier.

The biggest difference between this pretesting and the earlier pretesting you did is that you now have a draft of a finished product and you can see how it is viewed and understood as it all fits together. This pretest will ensure that the fully developed materials meet the needs of, and are acceptable to the audiences and are compatible with the audience's culture, age, and reading level. It will help you:

- Determine the strong and weak points of your materials;
- Identify elements of your materials that do work; and
- Fine tune words, concepts, and visual aids that aren't working.

Make sure to have enough copies for everyone to look at. If possible, print the copies in the colors you plan to use and on the paper that you will use.

Analyze Your Results and Revise Your Materials

As you did earlier after your initial pretesting, summarize your results. This summary will guide you as you revise your text, visuals, and layout.

After looking at your results, determine whether it is possible to revise the materials or whether the majority of pretest responses indicated fundamental problems that cannot be easily fixed. Careful preliminary testing of your messages and visual concepts should have lessened the chance that your materials would need to be substantially revised now.

IT OUT!
Chapter 1 provides more information about hiring professionals to help you with the design and printing processes.

Make Printing and Distribution Decisions

The final step in your materials development process is planning the printing and distribution of your brochures and letters. It's important to plan enough time in your production schedule for this phase of the process. Too often, when a project is behind schedule, the printer is asked to make up the difference. Haste can result in costly problems and poor quality. Typically, you should allow a minimum of 2-3 weeks for printing, depending on the quantity and complexity of your material.

Like any trade, printing has its own language and customs. Knowing the right term can help you avoid confusion and mistakes. If you have hired a professional design team, they can help you with this. It also useful to know trade customs, or the standard business practices of the printing industry.

Printers also can usually do your labelling and mailing. In this case, it is very important to have a distribution plan ready before you go to the printer.

In organized screening programs, invitation letters and brochures are frequently distributed together. The invitation letter includes specific information related to the recipient and the appointment (i.e., place, date, and time). The brochure varies depending on the stage of the screening process and the nature of the information the program wants to convey to the woman. Knowing how many and which kinds of brochures and letters you will be distributing in this way will help you know how many to print.

TIP!
This system is sometimes called a "tickler" system.

The following suggestions can help you through the printing and distribution stage:

Printing

- Before you print, make sure that the text has been completely approved first to reduce the possibility of having to pay extra charges for last-minutes corrections.
- When you're ready to print, date the material, choose the template, and send it to the printer. Then check the printer's draft before final printing.
- Always make sure that you ask for a proof of your publication to approve before it goes to print.
- If you need to make any changes, mark them clearly on your proof and photocopy it for future reference.
- If you are supplying images in a digital format, ask the printer to check that they are the right resolution. If you are supplying prints, transparencies, or negatives, the printer will need to scan these into the artwork so they need to be good quality to start with. If you are going to use your logo, make sure to get the correct original artwork.
- Consider how many brochurres you need to produce. Ordering a large amount may be cheaper but it is sometime more wasteful as it can go out of date quickly.

Distribution

- Make sure women receive information at an appropriate time, not a few hours before the procedure. This gives them time to think about the information you are providing and time to make plans.
- Check beforehand whether a printer might charge extra for delivering your material.

Looking Toward Chapter 4

The bulk of your work is now done. You've planned your material development process, learned about your intended audiences, developed messages and visuals, pretested them, written and tested them, and finally, printed and distributed them. Only one phase of the process remains: Deciding whether to update existing materials or create new materials. That's the focus of Chapter 4.

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Chapter 4:
Maintain Your Materials

- Decide Whether to Update Existing Materials or Develop New Materials
- Evaluate Your Materials
- Looking Toward the Epilogue
- References and Resources

In this chapter, you will have an opportunity to consider an important step that's often overlooked. Once you've completed all the hard work of planning your materials, learning about your audiences, and developing brochures and letters that meet your program and communication objectives, you still have one step left. It doesn't occur right away, but it does emerge eventually. That step is deciding whether you need to update your existing materials or develop new materials. (You actually were in the middle of this step at the beginning of this guide when you began your planning!).

This chapter considers a few of the factors that may lead you to one decision or the other, including a critical task—monitoring and evaluation—that will help ensure that your materials are accomplishing the objectives you set for them.

KEY STEPS IN PERFORMING ONGOING QUALITY MONITORING

- Decide whether to update existing materials or develop new materials
- Evaluate your materials

Decide Whether to Update Existing Materials or Develop New Materials

Your education and information efforts do not operate within a static environment. The populations your screening program serves and the world around them are constantly evolving. That means your materials also must change if they are to continue being appealing, relevant, accurate, and useful.

It's a good idea to convene your materials development team on a regular basis—annually or less often, depending on what's appropriate for your program—to review your brochures and letters. This review will give you the chance to determine whether your materials are still accomplishing the goals you set for them, which are to educate and inform your intended audiences and to encourage increased participation in breast cancer screening.

Based on this review, you may decide that some brochures and letters need no changes and others need to be updated. You may decide that some should be discontinued and new materials created to take their place. You may decide that you need brand-new materials on topics you haven't addressed before. Here are a few factors that may lead you to choose to update your materials or create new ones:

- **New evidence on technology or outcomes.** Cancer screening technologies are constantly being evaluated and improved, and new technologies developed. Studies showing the efficacy of mammography in women in certain sub-populations (for example, women younger than 50), may lead you to revise materials in order to include the most up-to-date recommendations. As newer technologies (for example, MRI) are tested for use in breast cancer screening and discussed in the mainstream press, you may want to include information on them, even if it is to clarify that the technologies are not yet recommended for routine screening.

- **Changes in policy and procedures.** Screening programs may change their policies and procedures based on new evidence on technology or outcomes or for other reasons, such as change in payor or screening program policies. If, for example, a payor decides that it will pay for annual rather than biennial mammograms or that women no longer need referrals for mammograms, materials may need to be revised to inform women. If screening policies change (to include women younger than age 50, for example), then materials need to reflect that change. If a screening program changes its web site or contact information or makes changes to its clinics (such as opening or closing sites or changing operating hours), materials also will need to be revised or created.

- **Poor performance or lack of effect with an audience segment.** You may find that your communications objectives for the materials were never met. For example, you may find that your materials were rarely used by members of your intended audience. This could be due to distribution (perhaps they were distributed through a health center rarely used by members of your intended audience) or problems with the material (perhaps the reading level wasn't appropriate or the materials were viewed as irrelevant or insensitive). If the intended audience isn't being reached because of problems with the material itself (rather than distribution), then you need to revise or develop new materials.

- **New sub-populations**. Immigration or changes in geographic location of your intended audiences may mean that your materials are missing an entire audience segment or reaching an audience for which they weren't designed. This can happen very quickly in some regions and countries, so it's important to periodically review your objectives in light of changes to the population living in your area and movements among your intended audiences.

- **Time for a "new look."** Even if the factual information in your brochures and letters remains current and accurate, the style and "look" of your materials may become out-of-date. You may need to revamp your layouts and visuals to make sure they are eye-catching to your intended audiences as well as appealing to new audiences you may be wanting to reach. New publishing software may make it relatively inexpensive to revise your presentations. Or, perhaps as more resources become available, you could improve paper quality or turn a black-and-white brochure into a full-color brochure.

Evaluate Your Materials

So, how do you know when it's time to revise or create anew? The decision is relatively straightforward when the first two factors—new evidence about technology or changes in policy and procedures—come into play. Decisions because of the other factors can only be made if you have good information about how your brochures and letters are being distributed and used and and a solid knowledge of your intended audiences and how they are reacting to and acting upon your materials. This information and knowledge comes from ongoing evaluation efforts.

IT OUT!
For more information on planning an evaluation for a communications campaign, see Flay and Cook (1991).

Evaluation is an critical part of the materials development process. After spending time and money developing your materials, you will want to determine whether they have met the communication objectives you specified during the planning phase. Your screening program may already be conducting an outcome evaluation to determine whether your communication or screening program as a whole has met its objectives. Your brochures and letters are just one communication tool, part of your overall communication campaign, and so the specific objectives of these materials are far more limited than those for your overall campaign. For example, your overall program objective may be to increase the use of screening mammography, but the more limited objective of a brochure or letter may be to improve attitudes about mammography among a specific audience and thereby increase this group's inclination to obtain the test. Your communications objectives for your brochures and letters should complement your overall program objective. As this field develops, an important task will be to articulate quality indicators for communication strategies.

IT OUT!
See Chapter 1 for more on formulating specific communications objectives for brochures and letters. And, for more on quality indicators for communications campaign evaluation, see Giordano et al. (2005).

As is true for your materials development process, monitoring and evaluating your materials should encompass a planning phase and an execution phase.

Plan Your Evaluation Activities

In your planning, consider two major aspects by which activities are evaluated—the process by which an activity unfolds (in this case, the distribution and use of your brochures and letters) and impact of the activity.

- **Process evaluation** has been defined as the "documentation and description of specific program activities—how much of what, for whom, when, and by whom." Process evaluation measures can be used to find:

  - —The number of brochures requested;
  - —The number of brochures and letters actually distributed;
  - —Which other organizations, if any, are distributing your brochures and to whom;
  - —The number and types of letters your program sends out; and
  - —The geographic coverage of the brochures and letters you distribute.

This information will essentially tell you whether and how people received your brochures and letters. It also will give you a rough idea of reactions to the materials.

- **Impact evaluation** measures such things as whether the brochure or letter was effective in bringing the audience in for screening, or whether women increased their knowledge as a result of reading the material. Impact may be difficult to attribute to brochures or letters alone, especially if other communication strategies, such as a mass media campaign or efforts by primary care physicians to encourage participation, are ongoing simultneously. There is value, however in considering whether your brochures or letters contributed to an impact objective. Impact measures include:
  - —Number of people requesting additional information after receiving your brochures (calling numbers or visiting web sites listed on the materials);
  - —Whether women followed instructions contained in letters;
  - —Whether clinicians report members of the intended audience seem confused or misinformed after reading your materials; and
  - —Whether administrative data show increased use of screening mammography by members of your intended audiences.

Carry Out Your Evaluation Activities

Here are a few simple ways to conduct both process and impact evaluation:

- **Talk to people involved in distributing your materials.** If you mailed out brochures, were a large number returned due to inaccurate addresses? If you distribute brochures through clinics, find out whether staff specifically hand the brochures to women in the intended audience or if it is simply available to them (for example, in a kiosk or on a table).

- **Send out short surveys.** You may want to develop a short (one page) survey to send to partners and participating clinics that asks both close-ended questions (e.g., numbers of materials distributed, how materials are distributed) and open-ended questions (e.g., reactions to materials from members of intended audiences). If time and money allow, consider surveying a small group of audience members who have been given the brochure. Do they remember reading it? What did

they learn from it? Did they understand the content and like the "look" of the brochure? What did they not like about it? Although these types of questions would have been asked in pretesting, it is still helpful to see if your material stands up in "real world" applications. If one of your objectives was to create a brochure that will be used by clinicians, survey this group to find out whether and how they are using it. Is it meeting their needs? Is it helpful when educating or counseling women? Clinician feedback is helpful and important when considering revisions.

- **Develop a feedback form.** Another way to find out what your intended audiences think of your materials is to create a short feedback form and place it in a rack next to your brochures.

- **Review your administrative data.** If a major reason for developing a new brochure was to reach an identified segment of the screening population, say for example, older women who have not been regularly screened, administrative data will provide estimates of whether more of these targeted women participated after they received your brochures. If your brochures and letters refer women to a web site or phone number for more information, keep count of women who go to the site or call. This will give you an idea of who has seen your material and has been engaged enough to look for further information.

These and other methods you use to evaluate your materials will guide you in determining whether your materials are still acceptable and useful as is or whether you need to revise and update them. These data also will help you understand new education and information needs that require new brochures or letters.

Looking Toward the Epilogue

This guide has now taken you through all the steps of the materials development process—planning, assessing your audiences, developing messages and materials, and deciding whether to update existing or create new materials. And, just as the materials development process is a cycle in which you end where you began, we close this guide with an Epilogue containing some additional thoughts on two issues we raised in the Introduction—applying this guidance to education materials for other types of cancer screening and applying this guidance for brochures and letters to other education and information media and formats.

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Epilogue:
Looking Toward the Future

This guide has described methods to design effective brochures and letters that promote participation in breast cancer screening and assist women to make informed decisions about their health care. Of course, the content of the brochures and letters must reflect the evidence base with respect to screening efficacy and effectiveness as well as key ethical principles. The essence of the materials development process is a continuing interaction with the intended audiences and the application of evidence-based behavioral science and communication methods and principles. Each step in the process helps to ensure that word and graphically-communicated messages will be understood and well received.

Applications to Other Cancer Screening

✓ IT OUT!
Though the topics in the Chapter 1 table "Topics to Cover in Breast Cancer Screening Materials" are directed to that cancer, many of the topics are applicable to colorectal cancer as well.

This guide has looked specifically at mammography and breast cancer screening, using examples from that literature to outline the process for designing print materials. This guidance also may be helpful in developing materials for other cancer screenings. Do keep in mind, however, that our example of mammography screening may differ from other cancer screenings in a number of ways.

First, the level of evidence for mammography screening has been demonstrated in different populations internationally, and a broad consensus exists among provider groups and other organizations (such as the American Cancer Society, the European Council, the International Agency for Research on Cancer, the Cancer Council Australia, and the International Union Against Cancer) that annual or biannual mammography is recommended for women older than age 50. Existing materials reflect the difficulty in making recommendations when consensus doesn't exist or when evidence is less strong. For example, average-risk women younger than age 50 and high-risk women younger than age 40 are either excluded in some sponsored screening programs or are specifically targeted in decision aids, such as that developed by the Ottawa Health Decision Center in Canada.

If you plan on developing materials for other cancer screening, such as prostate cancer screening, you will want to take into consideration the level of evidence supporting routine screening as well as arguments against it. Because of conflicting views of routine screening, messages developed for prostate cancer screening material may be far more complicated than those developed for breast cancer screening.

Second, developing materials for other cancer screenings may necessitate looking at both genders, as well as a wider age range. This will increase your options and challenges for potential intended audiences, which will affect your materials development, pretesting, and distribution. When doing preliminary development work for colorectal cancer screening, for example, you may want to hold

focus groups of one gender only or look at beliefs of men and women separately because they may differ. Or, when developing materials for cervical cancer, consider the age of your intended audience. Brochures and letters that are most appropriate for youth will differ from those intended for older women.

Test characteristics, risks, and efficacy also vary, and these differences will be important to discuss in educational materials. A literature review can help you determine which are the important test characteristics, benefits, and risks to discuss. When developing materials for colorectal cancer screening for example, you will need to determine which test or tests to cover, as each differs in its efficacy and risks. The risks of mammography are due mostly to the risk of false positives (and unnecessary follow-up tests and worry) or false negatives. The risks of colonoscopy are similar. Additional risks include the possibility of colon perforation, necessitating surgical repair. On the other hand, colorectal cancer screening and cervical cancer not only detect cancer (as does a mammogram), but also detect precancerous lesions (or, in the case of colon screening, polyps) which, if removed, may decrease a person's risk of ever getting those cancers. For patients to make informed decisions they need to be aware of the risks of the specific screening test, along with its particular benefits.

✓ IT OUT!
See Chapter 2 for more on conducting a literature review.

Applications to Other Types of Health Communication

Although this guide has focused on brochures and letters, many of the techniques and processes discussed here also apply to the development of other media and formats. The theoretically-based principles and methods used to identify an audience, for example, or pretest materials, will still be needed even when the channel of communications changes. Still, changes in health communications will affect patient education, and you will want to consider these possibilities in the context of your total communication campaign.

✓ IT OUT!
See Appendix 1 for more about other types of communication media.

Many organizations and programs already use the Internet to provide up-to-date information, tailored information, or a format that can be interactive and offer many visuals. Materials on web sites can offer links to other web sites for those women who wish to learn more, or they can offer interactive features (for example, some sites offer risk calculation, allowing a woman to see her particular risk for breast cancer). You can easily provide visuals and videos of screening procedures. Print messages can be coupled with audio and video. Additionally, young people may find the Internet attractive, notably for prevention of and screening for cervical cancer.

Some programs also are beginning to use computerized or non-computerized decision aids. These are interactive tools that guide a person in decision making regarding a particular behavior by providing information about the options and consequences of the behavior change, taking into account the person's beliefs, health status, or other data. In this way, the aid can tailor information to an individual's specific needs, thereby increasing the potential of the information being more relevant and useful. Computerized aids can use a multi-media format (sound, video, and text), which may be helpful when explaining difficult or unfamiliar material.

This sort of interactive health counseling has benefits, but the limitations also must be remembered. The technology needs to be available, and the consumer needs to be familiar with the use of the technology. A web site from the European Travel Commission reports that the percentage of population with Internet access varies—68% of the population in North America, 36% in Europe, 53% in Oceania/Australia, and 67% in Japan has Internet access. Even as Internet access becomes more widespread, many populations still have limited access. Materials developed for use on the Internet may not fully use the particular advantages the medium offers. Unless it is linked to video or audio, the material may be too difficult for some populations to use. For example, one recent study of 19 web sites devoted to colorectal cancer screening information found that, on average, the text was written at a grade 12.8 reading level. Numerous other barriers to readability also existed.

Conclusion

As we've seen throughout this guide, the information and education provided by breast cancer screening programs about the cancer, the screening tests, and associated procedures are critical to helping women understand an important aspect of their health. They also are essential to helping women become informed participants in their health care.

Taking time to follow the principles and suggestions in this guide can significantly improve the quality and appeal of your print education and information materials. We hope that these efforts will translate into increased participation by all eligible women in your screening program.

References and Resources Used to Develop the Epilogue

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Appendices :

1
Choosing the Right Communications Medium

As described in the Introduction to this guide, print materials like brochures and letters are often just one element of a comprehensive education and information campaign to promote breast cancer screening. You will need to consider many factors when deciding which medium (a mode of communication such as print, video, or the Internet) or format (a type of communication material, such brochures or posters [print media] or advertisement or infomercial [video media]). Although this guide focuses on using the print medium, we recognize that other media also may work.

Table A.1, opposite, shows the strengths and limitations of various media. Before you choose a medium consider the following:

- Your choice of medium should be dictated by what you learn about your intended audience's media habits. What media do they use most frequently? When they are making a health-related decision, what media do they turn to for information and guidance? What media will best complement your brochures and letters?

- Your choice of medium should be dictated by the nature and goals of your overall education efforts. Is the use of this medium part of a bigger campaign? Do you have the resources and the skills to use this medium (or the ability to obtain the professional expertise you might need)?

- Your choice of medium should be dictated by your messages. What messages will this medium need to communicate and how will they reinforce other parts of the campaign? Can the messages you want to emphasize be translated effectively into the medium you are considering? If not, what other medium might work better?

Table A.1 **Strengths and Limitations of Common Communications Media**

MEDIUM	STRENGTHS	LIMITATIONS
Print (Brochures, letters, decision aids, posters)	• Inexpensive to reach large audience • Information can be read by the audience at their own pace and can be re-read at their leisure • Can be tailored and targeted to a specific audience (multiple languages, cultures, low literate populations)	• Need to attend to literacy issues • Possible low emotional appeal • Production costs are moderate • Information can become outdated before the supply is depleted
Video/DVD	• Information can be watched as often as desired • Can have an emotional appeal • Can demonstrate screening procedure or show clinic and staff • Can be tailored to the specific audience (multiple languages, cultures, low literate populations) • Can be used in group settings	• Relatively expensive to produce, duplicate, and distribute, although costs are decreasing • Requires that the audience have equipment to watch at home or to go to the clinic to watch
Broadcast media (Radio and television)	• Can reach a large audience • Is generally brief (15-60 seconds) so is good at communicating a simple message • Visual appeal can have emotional impact	• Expensive to produce and broadcast • Cannot communicate detailed information needed for screening programs
Internet (Can post print materials including pamphlets and decision aids on a web site and incorporate DVD/video)	• Can reach a large but limited audience • Can be interactive • Messages can be tailored with information the person provides • Initially costly/high skill. Less expensive to maintain • Can update information easily without a high cost • Can provide the information in multiple languages • Can provide audio for the visual impaired and low literate population • Can use visuals and videos for emotional appeal and to show procedures or clinic and staff	• May reach only a limited audience because not everyone has a computer, computer skills, or Internet access • Unappealing to some even with access • Participant needs to be self-motivated to use program • Expensive to develop

Adapted from: Health Communication Unit, Centre for Health Promotion, University of Toronto. *Overview of Health Communication Campaigns*. Version 3.0, April 30, 1999.. 2005. www.thcu.ca/infoandresources/publications/OHC_Master_Workbook_v3.1.format.July.30.03_content.apr30.99.pdf [Accessed June 30, 2005]; National Cancer Institute (NCI). *Making health communication programs work: A planner's guide*. Bethesda (MD): NIH, 2004. NIH Publication No. 04-5145. www.cancer.gov/pinkbook [Accessed April 16, 2006]

2
Methods for Assessing Audiences and Pretesting Materials

At several different times during your materials development process, you will probably want to talk with members of your intended audience and others who know them well. During the audience assessment phase, you'll be interested in learning about their personal attributes and information needs so that you can segment them into groups based on common characteristics. During the message and materials development phase, you'll want to talk with them again to find out what they think, first, about your messages and visual concepts, and then later, about your nearly finished materials.

Five methods are commonly used for these purposes:

- **Focus groups** are group discussions on specific topics in which moderators ask open-ended questions (i.e., questions designed to stimulate discussion; they often begin with what, when, where, or why). Though the information elicited from focus groups cannot be considered representative, it is particularly valuable because is can provide rich and nuanced insights into the needs of your intended audiences.

- **In-depth interviews** are unstructured one-on-one interviews with audience members. Like focus groups, in-depth interviews often yield rich information about a topic and an audience. These interviews can be conducted with members of your audiences or with individuals who may have professional or in-depth knowledge of cancer screening or who are knowledgeable about particular audience segments.

- **Gatekeeper reviews** are used during pretesting and provide an opportunity for experts in the topics covered by the materials, partner organizations, and those who are knowledgeable about your audience to review your materials for accuracy, completeness, and cultural appropriateness.

- **Self-administered surveys** are questionnaires filled out by a respondent. They usually contain closed-ended questions (i.e., questions requiring only defined answers, such as yes or no or multiple choice) and can be conducted in paper-and-pencil forms or over the Internet.

- **Interviewer-administered surveys** are similar to self-administered surveys in terms of the types of questions asked. With these surveys, however, an interviewer asks a respondent the questions and then records his or her answers either on a paper or computerized form. These surveys are generally administered either in person or on the telephone.

Tables A.2 and A.3 provide further details about these methods. Table A.2 summarizes the strengths and limitations of the methods and Table A.3 summarizes the resources needed for each and provides suggestions for conducting them. The information is drawn from the following sources, all of which provide considerable valuable information about these methods:

- AIDSCAP Behavior Change Communication Unit. How to conduct effective pretests. Arlington (VA): Family Health International, 2005. www.fhi.org/en/HIVAIDS/pub/guide/BCC+Handbooks/effectivepretests.htm [Accessed June 30, 2005]

- Coyne CA, Iwasaki P, Lerner CS. *Listening to your audience: Using focus groups to plan breast and cervical cancer public education programs.* AMC Cancer Research Center in cooperation with and supported by the Centers for Disease Control and Prevention Cooperative Agreement #U50/CCU806186-03. 1994. www.cdc.gov/cancer/nbccedp/bccpdfs/amcliste.pdf [Accessed September 28, 2005]

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- National Cancer Institute (NCI). *Making health communication programs work: A planner's guide.* Bethesda (MD): NIH, 2004. NIH Publication No. 04-5145. www.cancer.gov/pinkbook [Accessed April 16, 2006]

- National Cancer Institute (NCI). *Clear and simple: Developing effective print materials for low-literate readers.* Bethesda (MD): NCI, 1994. NIH Publication No. 95-3594. www.nci.nih.gov/cancerinformation/clearandsimple [Accessed April 26, 2006]

Table A.2 **Audience Assessment and Pretesting Methods: Pros and Cons**

	PROS	CONS
Focus Groups	• Group interaction can stimulate responses and discussion • Moderators can probe responses for further information • Focus groups yield richer data than surveys about the complexities of an intended audience's thinking and behavior • Facilitator can note participants' body language, non-verbal communication	• Individual responses may be swayed or affected by group response/dynamic • Discussion can be dominated by a particular individual • Not the best choice for discussing sensitive or private material • Can be expensive • Can be difficult to arrange (for participants to meet at one time and place), especially in rural areas or in populations with limited access to transportation • Findings are not generalizable to the overall population
In-depth Interviews	• Good for sensitive or complex issues, confidential discussions • Can contact hard-to-reach audiences, such as people with limited reading skills, or those who are homebound or who don't have transportation to attend a focus group • Participants are not influenced by the statements of others, as can happen in focus groups • Can provide detail into behavior, opinions, and motivations	• Can be very time-consuming • If conducted by telephone, can be more difficult to get reactions to visual materials; impossible to assess non-verbal reactions • If by telephone, participants can be distracted by their surroundings
Gatekeeper Reviews	• Allows buy-in from partner organizations • Can identify potential problems (cultural insensitivity, readability) before pretesting with intended audience • Ensures technically correct information • May help in finding participants from intended audience for pretesting	• Does not replace pretesting with intended audience • Gatekeepers may be busy, may get low response rate
Self-Administered Questionnaires	• Can be cost-effective, especially when targeting hard-to-reach populations who lack transportation or who live in rural areas • Respondents can do the questionnaire on their own time; don't need to be available at a given interview time • Can result in increased number of respondents within intended audience if the right location is chosen • Computer questionnaires can be helpful when using complicated skip patterns	• Not appropriate for those with limited literacy skills • Possibility of low response rate • May require extensive phone or mail follow-up to increase response rate, therefore increasing costs • Respondents may turn in incomplete questionnaires • Structured instruments, which do not allow probing for more information • Requires pretesting questionnaire with a smaller group before distribution • Respondent may have questions or not fully understand an item • Skip patterns can make it complicated for respondents • Does not permit control of exposure to materials • If done by computer, may limit potential respondents to those comfortable with the technology
Interviewer-Administered Questionnaires	• Can be quick (15-20 minutes) and cost-effective to do • Can obtain qualitative data • Can be used with audiences who have limited literacy skills • Can reach hard-to-reach participants in locations that are convenient and comfortable for them	• Requires pretesting questionnaire with a smaller group before wide distribution • Must train interviewer • Results from intercept interviews are not generalizable • Intercept interviews are not appropriate for sensitive issues • Structured instruments, which do not allow probing for additional information

Table A.3 **Audience Assessment and Pretesting Methods: Resources Needed and Tips for Conducting**

	RESOURCES NEEDED	TIPS FOR CONDUCTING
Focus Groups	• Trained moderator, other observer or note-taker • Discussion guide or outline • Participants (enough to allow for no-shows) • Meeting space—a room large enough to be comfortable, perhaps with a table for note-taking or displaying materials • Audio-visual equipment needed for presenting materials (if necessary) • Recording equipment • Copies of materials being tested • Incentive for participants • Refreshments • Someone to do analysis and report	• Start by introducing yourself and other staff to the group; welcome participants and explain the purpose of the meeting. • Explain that notes will be taken or the session will be recorded in order to accurately describe the reactions and comments of participants. Reassure participants of confidentiality. Participants may need to be reassured that they indeed have worthwhile things to say about the subject, so mention that all comments/responses are helpful. • Begin using your discussion guide. Be aware that conversations are likely to go "off-topic." When that occurs, gently guide the discussion back to your questions. • Use open-ended questions (e.g., "What kind of picture or graphic would help you understand this material?") when you want to elicit thoughtful or detailed answers. Use close-ended questions when you want an exact answer (e.g., "Do you like picture A better than picture B?") • Use silence to your advantage. Waiting a bit before talking will give respondents a chance to talk, if they want to. • Avoid leading questions that give too much information or hint that there is a correct or preferred answer.
In-depth Interviews	• Trained interviewer • Questions/discussion guide • Participants • Facility to hold interview, or access to telephone • Copies of materials being tested • Incentive for participants • Tape recorder, if taping for transcription • Someone to do analysis and report	• Introduce yourself and briefly discuss purpose of interview. • Reassure participant of confidentiality and the importance of his/her opinions. • Respondents may want to give the answers that will make you happy. Don't lead them to any particular answer with your words or body language. • Conduct the interviews in a private, comfortable place.
Gatekeeper Reviews	• Interviewer, if needed • Questions geared to the reviewer's specific expertise • Incentive (possibly) • Materials to be reviewed • Someone to do analysis and report	• Provide clear and specific instructions telling reviewers what you want them to look for and comment on in the material. • Consider developing a feedback form that reviewers can fill in. • Ask them to make notes on the documents and return it to you.
Self-Administered Questionnaires	• Expertise to draft questionnaire • Postage (if mailed) or access to site (if handed out) • Potential respondents • Copy of materials to be tested • Copies of questionnaire • Incentive for participants • Someone to do analysis and report	• Before distributing the questionnaire, provide recipients with information that describes the questionnaire and its purpose, states the sponsoring organization, ensures confidentiality of responses, and notes the incentive. • After questionnaire is distributed, follow up as needed to ensure as high a participation level as possible. • Ensure that incentives are properly distributed in a timely fashion.
Interviewer-Administered Questionnaires	• Expertise to draft questionnaire • Trained interviewer • Potential respondents • Copy of materials to be tested • Copies of questionnaire • Incentive for participants • Location (if done in person) • Someone to do analysis and report	• Introduce yourself and briefly discuss purpose of questionnaire • Reassure participant of confidentiality and importance of his/her opinions • Provide a private, comfortable place for respondents to complete the questionnaire. • If conducted through intercepts, start by stopping people who look like they may be in your intended audience group. Ask a few simple questions to ascertain if they are; if they are not, thank them for their time. If they are in the correct audience, get consent to participate and move to a more private location to conduct the questionnaire.

3 References and Resources on Key Audience Characteristics

Sources of Population Surveillance Data

Eurostat

Since October 2004, Eurostat, the Statistical Office of the European Communities has made all its data and publications available free of charge on the Internet. Eurostat permits free access to economic and social information on the euro-zone, the European Union (EU), and the 25 Member States. More than 300 million pieces of data, from many different domains, are now available on the Eurostat web site, at http://europa.eu.int/comm/eurostat.

European Community Health Indicators (ECHI)

In the framework of the Health Monitoring Programme and the Community Public Health programme 2003-2008, the European Community Health Indicators (ECHI) produces a list of indicators for the public health field arranged according to a conceptual view of health and health determinants. A first set of ECHI indicators is available and comparable. These indicators include demographic and socioeconomic factors, health status, determinants of health, and health interventions. These data are available at http://europa.eu.int/comm/health/ph_information/dissemination/echi/echi_en.htm

WHO-Europe Health for All Database

This database contains data on about 600 health indicators, including basic demographic and socioeconomic indicators; some lifestyle- and environment-related indicators; mortality, morbidity and disability; hospital discharges; and health care resources, utilization, and expenditure. It allows easy and user-friendly analysis of trends and international comparisons for a wide range of health statistics to support the formulation and monitoring of health policy at national and international levels. The database can be found at www.euro.who.int/hfadb.

Health Information National Trends Survey (HINTS)

This U.S. National Cancer Institute survey collects nationally representative data routinely about the American public's use of cancer-related information. For more information, visit http://cancercontrol.cancer.gov/hints/.

Literature Reviews

PubMed

This comprehensive database of medical literature is offered by the National Library of Medicine, a part of the U.S. National Institutes of Health (NIH). www.pubmed.gov/

Survey Development Tools

National Cancer Institutes Guides & Reports for Questionnaire Design and Testing (http://appliedresearch.cancer.gov/areas/cognitive/guides.html)

Guidelines for Translating Surveys (www.rand.org/health/surveys/trans_guide.html)

Research Methods Texts

Krueger RA. *Focus groups: A practical guide for applied research* (2nd ed.). Thousand Oaks (CA): Sage Publications, 1994.

Michael Quinn Patton. *Qualitative evaluation and research methods.* Newbury Park (CA): Sage Publications, 1990.

Weisberg HF, Krosnick JA, Bowen BD. *An introduction to survey research, polling, and data analysis* (3rd ed.). London: Sage Publications, 1996.

Cultural Appropriateness Tools

Cultural Sensitivity Assessment Tools (CSAT)

These tools are designed for use with African American audiences but can be adapted for use by other audiences. http://www.tcc.state.tx.us/pcemat/reviewing.html

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Rudd RE, Moeykens BA, Colton TC. Health and literacy. A review of medical and public health literature. In: Comings J, Garner B, Smith C (eds.). *The annual review of adult learning and literacy*, Vol. 2. San Francisco (CA): Jossey-Bass, 1999.

Health and Literacy Compendium
www.worlded.org/us/health/docs/comp/index.htm

NALS (National Adult Literacy Survey)
www.literacycampus.org/download/NALS.pdf

Assessing Breast and Cervical Cancer Education Materials for Literacy Level and Cultural Appropriateness. Boston: World Education, 1995.

Test of Functional Health Literacy in Adults (TOFHLA)
www.peppercornbooks.com/catalog/information.php?info_id=5

SMOG formula is available at the Center for Disease Control, Human Subjects Research web site
http://www.cdc.gov/od/ads/smog.htm.

Fry readability scale is available at the Center for Disease Control and Prevention (CDC), USA
http://www.cdc.gov/od/ads/fry.htm.

Readability Calculations software
www.micropowerandlight.com

4
Blank Forms for Materials Development Planning

Worksheet 1.1 **A Planning Framework**

FORMAT	PURPOSE	OBJECTIVE	AUDIENCE	THEORY	MESSAGE	CONTENT	PRESENTATION

Worksheet 1.2 **Assessing Human and Financial Resources (Part 1)**

HUMAN RESOURCES ESTIMATES WORKSHEET						
	PRELIMINARY: MATERIAL A	FINAL: MATERIAL A	PRELIMINARY: MATERIAL B	FINAL: MATERIAL B	PRELIMINARY: MATERIAL C	FINAL: MATERIAL C
1. What skills are needed to carry out this project (writing, focus group moderation or interviewing, graphic design, computers, meeting facilitation, and development of culturally appropriate materials)?						
2. Who is available to work on this project?						
a. Each person's skills						
b. The time each person is available to work on the project						
3. What staff and skills are needed to fill gaps?						
4. What sources outside the program or agency can supply the staff or skills necessary for the project? Note whether donated or paid for.						

Worksheet 1.2 **Assessing Human and Financial Resources (Part 2)**

FINANCIAL RESOURCES ESTIMATES WORKSHEET						
	PRELIMINARY: MATERIAL A	FINAL: MATERIAL A	PRELIMINARY: MATERIAL B	FINAL: MATERIAL B	PRELIMINARY: MATERIAL C	FINAL: MATERIAL C
1. What money is budgeted for this project?						
2. What other sources of money are available from within or outside the program (for example, grants or donations)?						
a. Who is available to apply for the additional money?						
3. What are the materials development costs for this project (TOTAL of lines a.-f.)?						
a. concept testing						
b. graphic design						
c. writing						
d. printing						
e. distribution						
f. other						
4. What are the overhead costs for this project (TOTAL of lines a.-f.)?						
a. telephone						
b. postage						
c. space						
d. computers						
e. meeting expenses						
f. other						
5. What are the human services costs (TOTAL of lines a.-e.)?						
a. staff salaries						
b. staff benefits						
c. consultant fees						
d. other						

Table 3.1 **Purpose, Audience, and Draft Messages**

PURPOSE	AUDIENCE	DRAFT MESSAGE

Table 3.2 **Refined Messages**

PURPOSE	COMMUNICATIONS OBJECTIVE	AUDIENCE SEGMENT	THEORY	TARGETED/ TAILORED MESSAGE

Checklist 1.1 **Assessing Existing Materials**

DIRECTIONS:

Assess your printed materials using the following tool. Use the rating scale of 1 to 4 for each item in a major category.

1 = poor, 2 = fair, 3 = good, 4 = very good, N/A = not applicable

For each category, give an overall category rating of (+) *effective* or (–) *not effective* (X) or *unsure*

Name of medium (brochure/flyer/poster, etc.) _____

Author _____

Intended audience _____

Cost/availability _____

CATEGORY/CRITERIA	RATING 1 TO 4	OVERALL RATING		
		(+)	(–)	(X)
Content				
Is the information accurate, easy to understand, and meaningful?				
Clarity				
Quantity				
Relevancy to intended group (e.g., age, gender, ethnicity)				
Discussion of risks and benefits				
Readability level/difficulty				
Accuracy				
Format/Layout				
Is the overall format style appealing/understandable?				
Organizational style				
White space				
Margins				
Grouping of elements				
Use of headers/advance organizers				
Is the font size/style going to work with my intended group?				
Size				
Style				
Spacing				
Visuals				
Do the visuals support the text? Are they relevant?				
Tone				
Clarity				
Relevancy				
Accuracy				
Aesthetic Appeal				
Is this a publication that is likely to be looked at?				
Attractiveness				
Quality of production				

Checklist 3.1 **A Writer's Checklist**

DID I…	MATERIAL #1	MATERIAL #2	MATERIAL #3	MATERIAL #4
Write down a list of key points				
Develop an outline				
Make sure my facts are accurate				
Write simply and clearly				
Write with my audiences in mind by targeting and tailoring my content and presentation				
Use strong topic sentences				
Write short paragraphs				
Use underline or bold instead of italics or caps				
Write about one concept at a time				
Consider incorporating IDM				
Consider my audience's cultural motivation				
Consider how to discuss risk and benefit				