

Clear and Effective Patient Education

A Guide for Improving Health Communications
in the Hospital Setting



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Introduction

More than ever, those who provide health care now understand that communicating clearly with their patients is essential to quality patient care. Traditionally, communicating meant “telling” the patient important health-related information or handing the patient or caregiver a brochure, expecting that it would be read, understood, and followed. While these methods of communicating continue to have validity (although we now know that an interactive exchange between the patient and the provider is more effective than simply “telling”), technology has greatly expanded your choice of communication tools and methods in recent years. Added to your toolkit are CDs and Web-based interactive sites, among others. No matter which one you select, however, many common principles apply as you identify the best product for the situation or work to develop your own.

This guide will walk you through the steps of selecting and designing health communications materials that will meet the needs of your audiences, regardless of their health literacy level.

The spotlight throughout the guide is focused squarely on the patient population that you are trying to reach. As you develop a keen understanding of how your patients perceive your communication materials, how they process the text and graphics, and what factors make a difference in how your message comes across, you can increase the likelihood that your patients will be able to understand and appropriately act upon the information that is vital to their health outcomes.

You will also learn the importance of tailoring information to meet the unique needs of different age groups, racial groups, and particularly those with low literacy levels. Ultimately, our goal is to assist you in translating the inherent complexities of health care into a format that eliminates confusion and enables patients to function optimally as partners in their care.

Literacy and Health

As you plan educational materials for your patients, be aware that many of them may have poor reading skills. Nearly half of the United States adult population—90 million people—have low literacy skills, and 40 million of these are considered functionally illiterate. The latter cannot read most newspapers, which are written at the 8th-9th grade level.

On average, adults read 3-5 grade levels lower than the years of school they have completed. Reading skills atrophy when they are not used regularly. Thus, someone who may have completed the 12th grade may actually read at the 7th-9th grade reading level.

Research has shown that individuals with limited reading skills come from all walks of life and that illiteracy is not always a function of education level, although it can be related. Persons of certain racial or ethnic groups, the elderly, the poor, and persons with lower cognitive ability have a high prevalence of low literacy. In addition, a person's culture or beliefs may influence how they perceive a message.

Nearly half of the United States adult population—90 million—have low literacy skills, and 40 million of these Americans are considered functionally illiterate.

Navigating consumer health information, which often includes complex concepts, medical language, and numbers or calculations, can be overwhelming to even literate, normal-functioning people. The ability to understand and act upon health information is called **health literacy**. Low health literacy is of great concern because the inability to understand instructions or advice from health care providers can lead to adverse health outcomes.

In the aftermath of the 1999 Institute of Medicine (IOM) report, *To Err Is Human*, and the growing concern about patient safety, researchers intensified efforts to understand the magnitude of the problem of low health literacy and to search for solutions. An extensive review of this research, by the Agency for Healthcare Research and Quality in 2004, led to the observation that "...low reading skill and poor health are clearly related."

A companion report from the IOM, *Health Literacy: A Prescription to End Confusion*, called for all sectors, including health service providers, to “...be knowledgeable, aware, and responsive to the health literacy of patients.” Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards address this issue in PC.6.30, which states that patients are to receive education and training “specific to the patient’s abilities...”.

Persons with low health literacy can learn from health materials and communication strategies, as long as these are designed and presented with consideration of the reading and comprehension skills, levels of knowledge and experiences, cultural beliefs and practices, and communication expectations of the intended audience. Low-literate audiences need simple, basic information that is conveyed in formats that are appropriate for the intended audience.



Characteristics of Individuals with Limited Reading Skills

Understanding the characteristics of those with limited literacy skills is essential to the development of effective health communication strategies and materials. By tailoring your communication strategies and materials to the needs and skills of your patients, you can foster an effective learning environment.

Individuals with limited reading skills:

Take words literally

Individuals with limited reading skills cannot interpret words differently for new situations like skilled readers can. It is extremely important to keep information specific and unambiguous.

Read slowly

Individuals with limited reading skills read one word at a time and often miss words. By the time they get to the end of a sentence they have forgotten the preceding words. Long sentences inhibit the learning process. Thus, a brochure should be written with short, specific and direct sentences.

Skip over uncommon words

Individuals with limited reading skills tend to skip over words that are unfamiliar, such as: category words, technical words, value judgment words and concept words. Information contained in a brochure should be conveyed with simple, common words that are familiar to your readers.

Lack adequate frame of reference

Individuals with limited reading skills lack a broad set of references other than personal experiences from which to interpret, compare, and analyze new information.

Example:

Adults who can read the sports section and understand the highlights of last night's baseball game may not be able to read and understand instructions for taking medicine.

Depend on visual cues

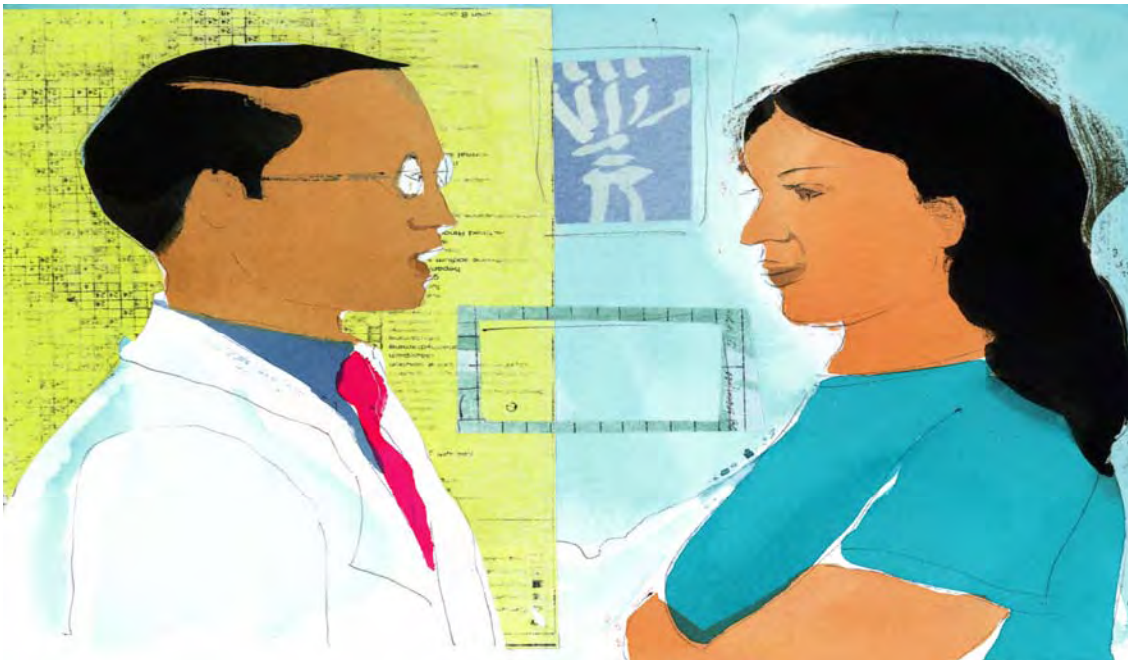
Individuals with limited reading skills rely heavily on visuals to clarify and help them interpret words. The old saying "a picture is worth a thousand words" is true for most people, regardless of reading skills. To reach individuals with limited reading skills, you should use appropriate pictures, illustrations and graphics in conjunction with words.

Have a short attention span

Individuals with limited reading skills tend to tire quickly when reading. Again, information should be presented in a short, concise, direct manner.

Hide their inabilities

Studies show that people who test at lower literacy levels do not perceive it as a problem. They describe themselves as being able to read “well” or “very well”. Unfortunately, there is a strong social stigma associated with illiteracy. When asked to read or given something to read, individuals with limited reading skills may give excuses like “I forgot my glasses”, “I need to take the papers home for my spouse to look over”, or “I don’t have time to fill out these papers or read this information”.



Patient Education Methods and Materials

Most of the population obtains and prefers health-related information from print sources including newspapers, magazines, books, brochures and web-sites. However, for individuals with limited reading skills, print sources are of little or no use in communicating health messages if written in a complex manner. These patients need access to methods and materials that do not rely solely on the written word.

Patient education has evolved dramatically in the past 15 years. Research has shed light on the best practices to reach low-literate audiences. In addition, new, innovative patient education methods, such as computer-based education, have joined traditional methods of delivering effective patient education.

As health care professionals and educators, we are challenged to identify and develop methods and materials that best meet our patients' individual learning needs. We must consider the unique individual needs of our patients in relation to their culture, age, race, gender, and social issues and physical and psychological or cognitive disabilities. The key to developing educational strategies and materials that reach your audience with your intended message is to involve your audience throughout the planning phase and pretest your materials on that audience. Including members of the target audience in all phases of planning will help to ensure that your strategies and materials are appealing, relevant, understood, and persuasive.

This section will provide an overview of a variety of patient education strategies and materials for low literate audiences.

The materials covered include:

- Verbal Communication
- Print Materials
- Visual Materials
- Action-Oriented Exercises
- Audio Materials
- Audio-Visual Materials
- Computer-Based Education

Verbal Communications

Discussing health topics with patients orally presents many challenges. Verbal instructions are often complex, delivered rapidly and easily forgotten in stressful situations. In addition, language barriers present comprehension problems. To verbally communicate effectively you must:

1. **Talk slowly.** It is important to slow down the pace of your speech when talking with a patient. Do not expect your patient to process large amounts of information at once. Most people have a limited short-term memory and can only remember 3-5 facts at any given time.
2. **Encourage questions.** Make sure you encourage your patients to ask questions and express concerns. A good idea is to have your patient bring a list of questions and concerns to each visit to help prompt discussion. Encourage questions by asking: *“What questions do you have?”* instead of *“Do you have any questions?”*
3. **Explain things in clear, plain language.** Use plain, non-medical language and define any new terms. Use words or expressions that are familiar to your patients. By listening to your patient, you may find they have their own terms that you can use. In addition, avoid jargon, statistics, and technical phrases.

Example:

Instead of:	Use:
× Analgesic.....	✓ pain killer
× Angina.....	✓ chest pain
× Atherosclerosis.....	✓ blood clot
× Benign.....	✓ not cancer
× Carcinoma.....	✓ cancer
× Immunization.....	✓ shot, vaccine
× Hyperlipidemia.....	✓ fat in the blood
× Hypertension.....	✓ high blood pressure
× Medication.....	✓ medicine, pill
× “Negative” test.....	✓ normal test

4. **Avoid using too many statistics.** Many people do not understand percentages. Make sure your patient understands all the numbers you give them before they make any treatment decision.

Example:

Instead of saying, “There is a 20% chance that you will experience X outcome”, tell the patient “20 out of 100 people will experience X outcome”.

5. **Use analogies and metaphors.** The use of analogies and metaphors can help the patient grasp a difficult concept. Make sure you select analogies that relate to things the patient already knows.

Example:

When explaining arthritis you may say: “Arthritis is like a creaky hinge on a door.”

6. **Focus on key messages and repeat these messages often.** Whether communicating in a verbal or written manner, it is important to limit your information to 1-3 key messages per visit. Reviewing and repeating each point will help reinforce the messages. In addition, it is important to make sure other staff reinforce the key messages.
7. **Use a “teach back” or “show me” technique to make sure your patient understands you.** These techniques will help you evaluate what your patient has learned and understood. Questions, such as “Do you understand?”, “Do you have questions?”, and “Do you think you can (check your blood sugars now)?”, are vague and give the patient the opportunity to avoid the question with a simple yes or no answer.
8. **Use other communication strategies and materials to enhance your interaction.** People learn by hearing, seeing and doing. The more senses you can involve in the learning process the greater the likelihood that your patient will understand and remember information.

Teach Back:

“I want to make sure I explained everything clearly. If you were talking to your husband/wife/friends, what would you tell them we talked about today?”

“Let’s review the next steps. Can you tell me the 3 things that you need to do before the next visit?”

“How would you know (if your blood sugar was low)?

Print Materials

There are a variety of print formats you can use: postcards, fact sheets, brochures, and booklets. Whatever print format you decide to use should be created in an easy-to-read format.

Patients are faced with complex health information and treatment decisions. Most of the health information delivered to patients is in print: consent forms, medication directions, insurance forms, written instructions, health brochures and pamphlets, test results, treatment options and treatment protocols. The inability to read and understand these materials limits access to care and ability to make informed decisions. Print materials should not be relied upon as the only source of important health information. Print materials should be used to reinforce verbal communication and other methods described in this section.

Low-literate patients need simple, basic information. Studies suggest that audiences of **all** reading capabilities prefer and better understand information that is presented in a simple, concise, clear manner. Reading for information is different than reading for pleasure. When reading for information, people want the simple, plain facts.

There are a variety of print formats you can use: postcards, fact sheets, brochures, and booklets. Whatever print format you decide to use should be created in an easy-to-read format. More information on creating easy-to-read materials can be found in the “Steps for Developing Brochures” section of this guide.

Visual Materials

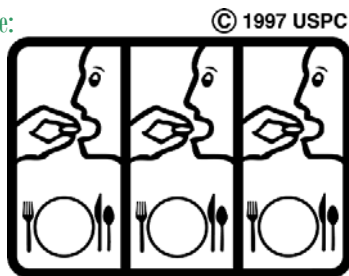
Visual materials help people remember information they hear. Research suggests people remember 10% of what they read, 20% of what they hear, 30% of what they see and 70% of what they see and hear. The use of visuals can help teach about something that can not be easily seen (example, female internal anatomy). Visuals can illustrate a specific point and demonstrate steps to follow to complete a task. In addition, visuals are an effective way to present real-life situations.

When working with visuals, it is important to select visuals that are relevant to the topic and audience. Make sure the visual reflects the culture, age and background of the audience. Show people that look like they could be family or friends and objects that are familiar. In addition, make sure the visuals are simple, recognizable and clear. Action-orientated visuals that show the patient actions you want them to take are effective. Avoid showing images you do not want the patient to take. If you are using photographs, make sure they depict “real-life” events, showing people and conveying emotions. Simple lined drawings work well for showing step by step procedures like drawing blood.

Examples of visual patient teaching methods include:

1. **Pictographs** are simple line drawings of an idea or action usually drawn with the patient in the room so the images can be explained. This is an effective way to convey complex information or actions in a quick, inexpensive and meaningful way. Anyone can do a pictograph. They need not be works of art. In fact, the simpler the drawing, the better.
2. **Posters** are usually large pieces of paper with illustrations, drawings, or photographs and a limited amount of text. They are generally used to raise awareness of a particular health concern or to provide limited amounts of information. Posters can be used as a stand alone source of information and can be placed in a variety of settings.

Example:



Take 3 times a day with meals



3. **Flip charts** are a series of posters put together in sequence to tell a story or provide step-by-step instructions. They are generally used by a facilitator giving a presentation to a group or individual.

4. **Talk boards** are posters without any words. They can be used alone or in a series. They may include photographs or drawings used to show an action or behavior or to show an everyday scene or situation. Talk boards are used by a facilitator to promote discussion in a group on a health issue or concern.

5. **Flannel or display boards** involve the use of flannel, felt or other sticky materials to attach pictures to a display.

6. **Real objects and models** are three-dimensional, real-life or to-scale teaching aids. Using real objects or models makes concepts and ideas easier to understand. You can use models to demonstrate a procedure and then let the patient practice the procedure.

Example:

- ✓ Model of a breast to teach breast health
- ✓ CPR models to teach CPR
- ✓ Breathing apparatus

7. **Fotonovelas** are stories told with pictures and dialogue similar to a comic book format. The stories portray real-life situations in an entertaining and educational plot.

Action-Orientated Exercises

Action-orientated exercises or strategies are effective because they directly involve the learner. These exercises are helpful when you want your patient to practice a new skill or behavior. Action-orientated exercises are effective at keeping the learner involved and interested in the subject matter.

1. **Role play** is a helpful technique because it allows audience members to act out a situation that is relevant to them, either real-life or situational. Typically, a scenario is provided and each participant assumes a character role and tries to act as the character would.

Example:

An individual plays the role of a person with diabetes checking their blood sugar level, while others may play the role of doctor, nurse or family member.

2. **Theater** is a form of public play acting that can appeal to people who don't typically go to meetings or health-related classes. Theater involves actors who appeal to the target audience, performing a story or play that is based on true, personal stories and experiences. A discussion generally follows the performance.
3. **Songs** are words or stories set to rhythm and music. Simple words and familiar tunes can help people remember things. Songs do not require

reading or writing skills and can be easy to develop.

4. **Storytelling** is the act of teaching a lesson through a story about personal or real-life experiences. Stories allow the learner to identify with story

Example:

Rap song to teach anti-drug messages.

characters who find solutions to problems similar to their own.

Storytelling can be used in two ways, with either the provider or the patient telling the story. If you tell the story, keep it brief and to the point. If your story is too long or has too many details, the patient may not understand the main message. When your patient tells a story, listen attentively and repeat back to them the main points so you make sure you understand. A discussion should follow the telling of a story.

5. **Games** can be an entertaining way to get a group of people to interact.

Audio Materials

Audio materials rely upon hearing. They are useful when the audience has limited reading and/or visual capabilities.

1. **Audiotapes** involve recording information on a cassette tape or other communication medium. Audiotapes' effectiveness can be increased with the use of booklets, work sheets, talk boards or slides.
2. **Radio docudramas** use radio to deliver health information using an entertaining method.

Audiovisual materials involve both hearing and sight. Because most people are visual learners, adding an audio component can motivate the viewer to watch the presentation, increase identification with the characters or message, and help the viewer retain the information. As discussed in the Visual Materials section, it is important to select visuals, as well as a narrator, that the audience can relate to.

1. **Videotapes** incorporate moving pictures and sounds. The more engaging or entertaining the video, the more likely it will be viewed by the intended audience. The language, dialect, characters and scenery used in a video can help the viewer identify with the message or story being conveyed. Videos can be used in a group setting when appropriate equipment is available.
2. **Slide-tape presentations** involve an audiotape synchronized to a series of slides for use with or without a facilitator to discuss the information presented. Some audiences are too media-sophisticated to be satisfied with still life presentations.

Computer-Based Education

The advent of widespread computer use and Internet access has given the computer a greater role in patient education. Public use of the Internet as a source for health information has grown dramatically in the past few years, and this trend is expected to continue. The computer provides a number of advantages. Computers allow an individual to learn at their own pace, provide a private learning environment, and reinforce the learning that has occurred. Computer-based education can be tailored to the individual's age and specific learning needs.

1. **Touch screen technology** uses text, visuals, audio, video, and interactive computer techniques to reach people with health information. Patients interact with a teaching module by using the screen to move throughout the module. Questions can be added to the module. This allows the patient to get immediate feedback on their learning and allows the provider to assess learning. Touch screen technology presents health information in an organized, comprehensive, prompt and interactive manner.
2. **Interactive multimedia** programs combine audio, video, graphics and text in an engaging, interactive format with visually enhanced information. Patients can access this information at their own pace, maximizing privacy and minimizing any sense of pressure. Multimedia programs can be produced in many formats such as compact disc to be played on a computer (CD-ROM) or a television (CDI), or on the hard drive of a computer.
3. **Websites** can be a valuable source of health information for many people. Most websites offer health-related information in text format. However, websites are increasingly offering interactive patient education in the form of expert Q&As, on-line consultations, listservs, bulletin boards and chat groups. Websites can open the door to additional resources through links.

It is important to remember that people do not read on the Web the way they read other print materials. Instead, they scan and skim. Hence, the information should be presented in an easy-to-read, easy-to-find format. Unless you invest the effort to ensure that your site is accessible and easy to use, it may never reach the people it is intended for.

These steps can help improve the accessibility of your website:

- a. **Use a large type size.** Use 11-point type or larger to make it easy-to-read.
 - b. **Use contrasting foreground and background colors.** In general, use black text on simple white or light background.
 - c. **Use consistent style and navigation.** Format each page the same so the reader can find the information they are looking for quickly.
 - d. **Use short sentences and paragraphs with headers.** Readers tend to scan websites. The use of headers to break up blocks of texts can help the reader find what they are looking for.
 - e. **Use a simple design.** Avoid distracting elements like flickering designs and pop-up windows.
 - f. **Use plain, simple language.** As with other written materials, use simple, clear, concise and action-orientated text.
4. **E-mail** combines the informality of speaking with the permanence of the written word. Patients can print out messages as reminders and providers can print copies for medical records. Communicating via email allows patients and providers to communicate at their own convenience. In addition, email allows you to provide links to other on-line sources of information.

Because email relies on the printed word, it can present challenges to readers. It is important to follow the guidelines established in the “Steps for Developing Brochures” section of this Guide to make sure that your text can be read and understood.

Electronic communication also poses privacy and security challenges. For example, e-mail from computers with “shared accounts” can be read by others. If a patient sends or receives email at work, their employer has a right to read their messages. There are ways to address security and privacy concerns:

- a. **Email only when necessary.** Establish guidelines on when it is appropriate for your patients to email you and what types of information it is appropriate to communicate.
- b. **Clearly label email messages.** Indicate the purpose of the email on the subject line for example, “medical advice” or “billing questions”.
- c. **Agree on response times.** Let your patient know when they can expect a response from you. You can use an auto-response to let your patient know you have received their email and will respond by a certain time. Always include a phone number in case your patient needs to reach you.

- d. Reinforce that email is NOT for emergency or other time-sensitive situations.
5. **E-Monitoring:** Several monitoring devices using the Internet have been developed to help patients manage their medical conditions at home. For example, diabetic patients can test their blood glucose level by using an e-device, which with the click of a computer mouse downloads the result to a health care practitioner.
6. **On-Line Support Groups** exist for almost every disease and condition. Online support groups provide patients with the opportunity to communicate with other patients facing similar health challenges.

Steps for Developing Brochures

Step 1: Planning the Brochure

Identify the Resources Needed

There are several expenses involved with producing a brochure. In addition to staff time, costs may include hiring a writer, a designer, a typesetter, and a printer. You may also need photographs, illustrations, maps, or graphs. Printing is usually the single largest expense.

During the planning phase of the brochure, it is important to identify your time frame, existing funds, needed funds, and staffing issues. Defining these issues will help you determine what kind and how many brochures you can produce.

Define the Target Audience

Understanding who you are trying to reach with the brochure is essential to the development of the brochure. Your target audience will impact how you write, what you write, how you design, and how you distribute your brochure. The better you can tailor your brochure to the needs and interests of its readers, the more effective your communications will be. During the planning phase, get to know your audience by discussing relevant issues with them.

Identify the Resources Needed

Ask yourself:

1. Who has development responsibility?
2. Who will write the brochure?
3. Who will edit the brochure?
4. Who will design the brochure?
5. Who will produce the brochure?
6. What are the production costs?
7. What cost estimates are needed?
8. What is the development schedule?
9. How many brochures are needed?

Define the Target Audience

Ask yourself:

1. Who is the target audience?
2. What is their age and gender?
3. What is their literacy level?
4. What are their needs, interests and behaviors?
5. Are there members of the target audience(s) who can provide input on the development of the brochure?
6. Where will the brochure be distributed?

Define the Goals and Objectives

One of the most important steps in the planning phase is to identify the purpose of your brochure. Identifying your goals and objectives will help you write a clear, concise, and understandable brochure that will impact your target audience in the way you intended.

Example:

- Goal:** To reduce the likelihood of poisoning in the home.
- Audience:** Young mothers
- Objectives:**
1. Identify common poisons in the house.
 2. Understand proper storage of poisons.

Determine the Key Concepts and Messages

Once you have identified your brochure's goal and objectives, you'll need to identify the information to include in the brochure. This information, the key concepts or messages of your brochure, should help your readers in meeting the behavioral and learning objectives described in your brochure.

Keep in mind that readers, particularly those with limited reading skills, need simple, basic information that is easy to read. It is important to limit the information contained in your brochure to what the audience needs to know, not what is "nice to know".

Example:

- Goal:** To reduce the likelihood of poisoning in the home.
- Audience:** Young mothers
- Objectives:**
1. Identify common poisons in the home.
 2. Understand proper storage of poisons.

- Key Messages:**
1. List of common poisons in the home.
 2. Store poisons in child-resistant containers (CRCs).
 3. Store poisons in locked cabinets, out of the reach and sight of children.

Define the Goals and Objectives

Ask yourself:

1. What is the brochure's purpose?
2. What do we want to convey?
3. What attitudes do we want to alter?
4. What behaviors do we want to change?

Determine the Key Concepts and Messages

Ask yourself:

1. What information does the reader need?
2. What concerns of the reader do you want to address?
3. What misconceptions do you want to address?
4. What are the key concepts and messages?
5. Do we have too many concepts and messages?
6. What information do we need to convey?

Research the Topic

Become the expert on the topic of your brochure. Remember, you are writing to inform the reader. Before you begin writing the text of your brochure, consult with experts in the topic area, medical journals, books and other sources of information.

Develop an Outline

Before you begin to write the text of your brochure, develop an outline of what you want to say. This will help you organize the information about the topic and will make writing the brochure easier. In the outline, list the concepts or messages you want to convey and refine them to their simplest form. Make sure you break your topic into parts and arrange the parts in a logical sequence within the outline. Information that flows logically from point to point makes it easier for the reader to follow along as they read. It also prevents the reader from becoming discouraged when a lot of information is presented.

Research the Topic

Ask yourself:

1. Is everything in the brochure?
2. Do we have the most current and accurate information?
3. Is there an expert who is available to check the accuracy of the information?

Develop an Outline

Ask yourself:

1. Does the outline clearly reflect our goals and objectives?
2. Does the outline cover the essential concepts, messages, and information?
3. Does the outline pique an interest, influence attitudes, provide new or important information, or encourage the reader to take action?
4. Do my thoughts move easily from one idea to the next?
5. Does each part of the outline prepare the reader for what is to follow?

Involvement of the Target Audience and Other Experts in the Topic Area

Make sure you talk to members of your audience in order to understand their needs and obtain their input in the planning of your brochure. This will help ensure that you communicate effectively.

Define the Distribution Plan

Consider how and where the materials will be distributed to your target audience. If you want to get your materials to those who want and need them, you'll need a distribution plan. Hospitalized patients will likely rely on the hospital staff for receiving printed materials and access to audiovisual broadcasts (e.g., closed circuit patient education television, telephone-based advice lines). Bedded patients should not be expected to be proactive in seeking health information; therefore, the distribution plan for this audience must include cues to help the hospital staff remember patient education.

Example:

When posted in a patient's room, this sign can serve as a "cue" to staff for good hand hygiene. It also teaches patients to observe staff to ensure that all healthcare providers have washed their hands.



Involvement of the Target Audience and Other Experts in the Topic Area

Ask yourself:

1. Where can I find members of the target audience to provide input on the brochure development?
2. What kinds of information do I need to gather from the target audience?
3. What kinds of methods can I use to gather the information from the target audience?

Define the Distribution Plan

Ask yourself:

1. Where does the target audience get health related information?
2. Where would we be able to display our brochures?
3. How many brochures do we need?
4. How will we keep each distribution point stocked?

For patients...

5. Could signage motivate the patient to seek health information or remind the staff to provide it?
6. Is Patient Education part of the patient care or discharge plan?
7. Is patient education documented?

Identify the Look and Design of the Brochure

Finally, consider how your brochure will look. There are several design factors to consider when designing a brochure: size, layout, type, color, paper, and graphics (which include all visual elements).

Consider working closely with a design expert throughout the planning and writing process to define the look and design of your brochure.

Size - Often the size of the brochure is determined by how much there is to say. A standard brochure size is 8 1/2" x 11", folded twice, so there are three panels on each side. A larger standard size is an 8 1/2" x 14", which can be folded three times, to give you four panels on each side.

Layout - Layout is the arrangement and balance of text and graphics on the page. Layout can make an enormous impact on how your readers perceive the brochure. A clean, simple, straightforward layout enhances communication. A crowded, cluttered layout can be a real barrier to communication. This is especially true for low-literate readers. (See Writing the Brochure for more information on layout.)

Type - There are many type faces or fonts (Times New Roman, Helvetica, etc.) that come in different sizes (10 pt, 12 pt, 14 pt, etc.) and styles (bold, italic, shadow, and outline). The best type to use in your brochure is the one that your target audience finds easiest to read.

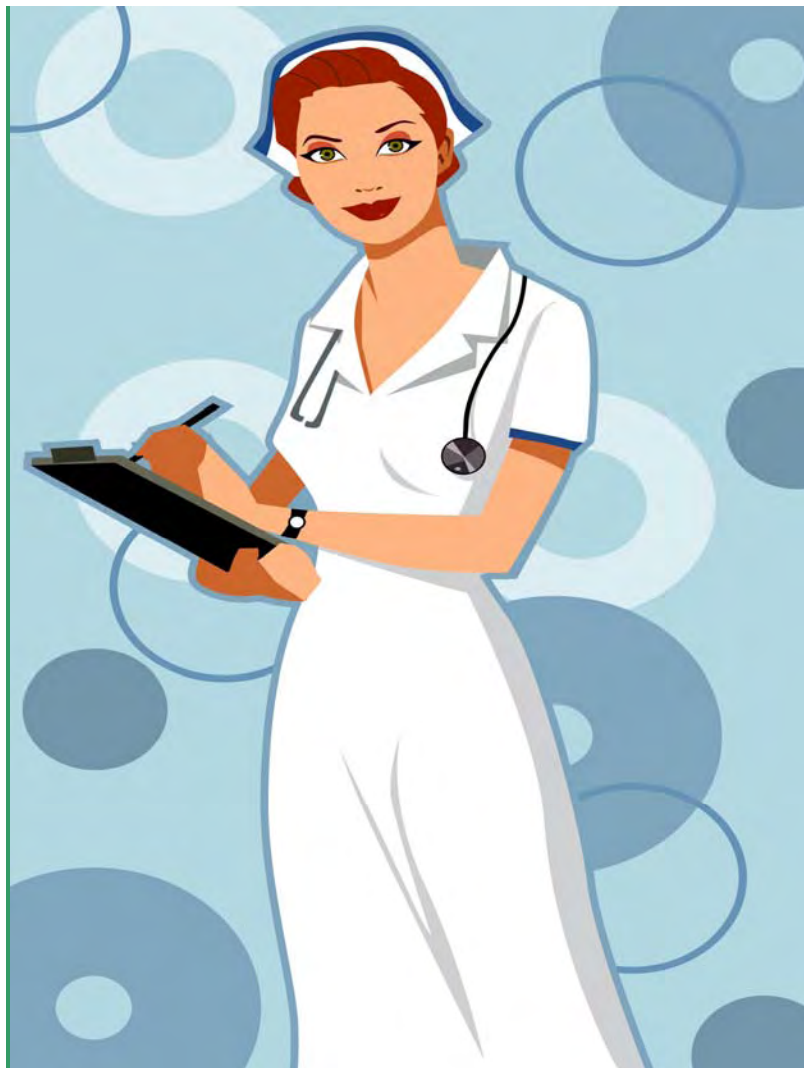
(See Writing the Brochure for more information on layout.)

Color - Black text on a white background gives the highest contrast and readability, but using color is a great way to add interest and depth. Avoid "color overload"; use color in the few areas where you want to draw attention. Readers vary in their personal taste for color; however some colors work better than others. Darker colors on light backgrounds are the easiest to read. Often a good idea is to use black (or similarly dark, crisp color like navy or purple) and one other accent color.

If you are planning to use colored paper, be careful – brightly colored paper may be eye-catching, but your audience is less likely to read it. Black or dark text on very light colored paper is the best choice. For all matters of color choice, be sure to interview your target audience to determine any cultural biases or offenses to certain colors.

Paper - The paper you use can add or detract from the impression of your brochure, so choose it carefully. When selecting paper, consider its durability. If you want the brochure to last, use a more durable paper. Also, consider the paper's opacity. This is the degree to which the ink from the other side shows through.

Graphics - Graphics include illustrations, photographs, charts, maps, graphs, and all other visual elements. Halftones, such as photography and other images with shadings of gray, are more expensive to reproduce than solid line images. Select your graphics with care. Dull photographs, weak art, graphs, or maps that are hard to read can seriously detract from your brochure. (See Writing the Brochure for more information on layout.)



Step 2: Writing the Brochure

When creating your materials, keep in mind the following concepts:

Content

Purpose/Objectives

Keep the purpose or objectives of the brochure focused and limited. Clearly present the purpose of the brochure by explicitly stating it in the title, cover illustration, or introduction of the brochure. This will help grab and hold the reader's attention.

Relevance

Make sure the information conveyed in the brochure is relevant and meaningful to the intended audience. Involving the audience in the planning and writing stages will help ensure that this will occur.

Cultural, Gender, and Age Appropriateness

Make sure the information is culturally, gender, and age appropriate for the intended audience. Again, involving the audience in the development of the brochure is essential to the success of the brochure.

Scope

Limit the content of the brochure to essential information directly related to the purpose. Make sure the number of concepts, points, and messages are limited. Focus the content of the brochure on behaviors, skills, and "how-to" information that will help the audience solve their problems. Information conveyed through brochures should encourage thinking rather than merely providing facts. The information should be action-oriented. Make sure the brochure is action-oriented by using concrete examples rather than abstract concepts and using graphics that show the appropriate skills being performed. The more clearly you can get someone to visualize what they are supposed to do, the more likely they will remember and do it that way. Finally, repeat and summarize main points often. This will help the reader absorb the information.

Accuracy

It is important to make sure that the information and graphics contained in your brochure are accurate and up-to-date. Materials should be reviewed and/or revised at least every two years. Include the date of development in your brochure. This way, the brochure reader will know whether he /she has current medical information.

See Appendix B for an example of a “re-write” of a brochure.

Example:

Abstract & Unclear:	Keeping things clean cuts down on the chances of disease.
Concrete & Clear:	After you cut up a chicken, wash the cutting board with soap and water.
Abstract & Unclear:	Dirt, hair, or other debris can contaminate food.
Concrete & Clear:	Wear a hairnet whenever you are in the kitchen.
Abstract & Unclear:	Cold water is best for burns.
Concrete & Clear:	If you get a burn, put it under cold water right away.

You try it!

Here are some statements which can be made more concrete. In the space on the right, write a specific behavior suggested by each statement.

1. Low fat, high fiber diets are best. _____
2. Salmonella is preventable. _____
3. Small children eat less. _____
4. Get organized before you make a recipe. _____

Tone and Appeal

Present the information in a positive, truthful, sincere manner. Make sure the brochure is free from bias, prejudice, or misleading concepts.

Recognition

Recognize your organization by placing its logo somewhere in the brochure. Also, include a phone number and/or an address for the reader to contact for more information on the topic or your organization.

Literacy Demand

Reading Level

The reading level of the text of the brochure should be low enough for your audience to read and understand. Reading level is highly dependent on sentence length and word difficulty. It is also dependent on print size and type style, color contrast between ink and paper, concept density, and unfamiliar context. Test the readability of the text using one of the many different readability formulas available. Most of the formulas are based on two factors: word difficulty (polysyllabic words) and sentence length. The Fry Formula is a widely accepted readability formula. This formula applies to grades 1 through 17. Materials should be written at the 6th grade level or less.

(See Appendix A for directions on how to use the Fry Readability Formula.)

Vocabulary/Language Use

The use of uncommon, multi-syllabic words can increase the reading level of your brochure dramatically. When writing the text of your brochure, choose your words carefully. Use common, explicit, short words of 2 syllables or less.

Similarly, use words familiar to the audience, avoiding jargon, technical terms and phrases, and abstract words. Statistics should also be avoided because they may be hard to interpret. Avoid abbreviations and acronyms. They require a frame of reference most people don't understand.

If you must use words or expressions that are unfamiliar to the audience, explain them through simple definition, word/picture association, or by example.

Concept words (words used to describe a general idea or an abstract framework or reference, e.g., poultry, which could refer to chicken, turkey, hen, quail, duck, etc.), and value judgment words (words that describe amounts or thresholds for action, for example "lots" of water or "safe" sex), should also be avoided when writing brochures.

Use positive statements instead of negative statements, which tend to be less motivating. Avoid starting sentences with "Don't" and "Never".

Avoid the use of contractions which spell other words such as *she'll*, *I'll*, or *we'll* (these can be confused with *shell*, *ill*, and *well*, respectively).

Finally, use terms consistently throughout the materials. This speeds up the mental processing of words so that information can be processed into long-term memory.

Clarity

Make sure the information conveyed in the brochure is clear and easy to understand. Any chance for the reader to misunderstand the information must be eliminated.

Sentences, Paragraphs

Use a conversational style and active voice when you write. That is, write the way you talk. A message written in active voice is more direct and makes a stronger statement. Passive sentences are often wordy and roundabout. Passive voice places the “receiver” of the verb’s action before the verb and the “doer” of the action comes after. For example, instead of “Seatbelts should be worn by children”, use “Children should wear seatbelts”.

Use short, simple sentences of 15 words or less. Short sentences are easier to read. To shorten sentences, take out unnecessary words, descriptive phrases and clauses.

Keep paragraphs short, simple, and direct. Avoid large blocks of text. Eliminate excess information that may be confusing or distracting.

Example:

Poor: The program will be terminated when funding is exhausted.

Better: The program will end when we have used up our funds.

Or:

We will keep the program until we run out of money.

Poor: Participants should register prior to the start of the program year.

Better: Sign up before the program begins.

You try it!

Rewrite these:

There has been a modification to the schedule.

Combining alcohol with other drugs may have deadly consequences.

Spelling

Don’t forget to check your spelling for accuracy by using a computer-based spell-check program and by actually reading the text. Have at least one other person proofread the text.

Organization and Format

The organization of your brochure can make the information easier to read. Even a well-written brochure can be ignored if the visual presentation is not done well. The format of a brochure should be simple and uncluttered. It should be a balance of text, illustrations and design features.

Context

Give the reader the context in which to interpret new information by presenting the context first before giving new information. Readers understand better when they are given the framework or context first and then the new information.

Example:

Poor: Broccoli, sweet potatoes, peas, spinach, and squash have many nutrients.

In the above sentence, the readers must try to carry the whole list in memory as individual items. The reader has no framework as to how they fit together until they arrive at the end of the sentence. Thus, they may forget them before they finish.

Better: Vegetables with a lot of vitamin C include broccoli, sweet potatoes, peas, spinach and squash.

Correct Use of “If-Then” Statements

Poor: Call your doctor if you have nausea, diarrhea, vomiting, dizziness, or headaches.

Better: If you have nausea, diarrhea, vomiting, dizziness, or headaches, call your doctor.

For “If-Then” statements, set the context of the instructions by stating the “If” first.

Sequence

Sequence the information logically, in an easy-to-follow manner. Use step by step (e.g., 1, 2, 3), chronological (a time line), or topical (using main topics and subtopics) sequencing. Present key information first and/or last. People tend to remember what they read first and last. They often skip over information between the introduction and summary sections. Also, repeat key information as often as space permits.

Grouping or “Chunking”

Chunking is the process of grouping like information into several smaller, logical pieces. For most people, 3-5 items per chunk is a reasonable limit. Chunking allows the reader to experience a number of small successes in learning and understanding.

Example:

- Poor: What can you do when you get the urge to smoke?
- Chew gum
 - Save your cigarette money for a present for yourself
 - Call a friend
 - Have a healthy snack
 - Breathe through a straw
 - Drink water
 - Relax!
 - Go places where you can't smoke
 - Chew on a cinnamon stick
 - Clean up your house

Good Example of Chunking:

- Better: What can you do when you get the urge to smoke?
- Do Something Else**
 - Call a friend
 - Go places where you can't smoke
 - Clean up your house
 - Put Something Else in Your Mouth**
 - Chew gum
 - Have a healthy snack
 - Breathe through a straw
 - Drink water
 - Chew on a cinnamon stick
 - Be Good to Yourself**
 - Relax!
 - Save your cigarette money for a present for yourself

Titles

Titles should stand out from the rest of the text. Use a larger font size, different type face, bolding, or italicizing to make the title different.

When you add creativity and fun to your thinking, your message will be lively and more engaging. Here are some examples of titles that might be more interesting to patients.

Example:

Instead of this

- × Caring for Your Child's Teeth
- × Lead Dangers in Your Home
- × Immunization Notice

Try this

- ✓ Caring for Your Child's Teeth: *How to Be a Gold-Star Tooth Fairy*
- ✓ Lead - The Sneaky Danger
How to Get the Lead Gone
- ✓ Duck the Dangers of Measles, Mumps, Diphtheria, and Polio
-Or-
✓ Get there first with the shots that prevent childhood diseases.

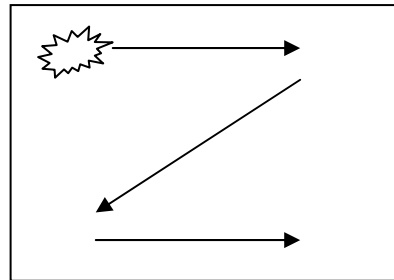
Headings

Headings are used to organize information. They give an ordered look to the brochure, help the reader locate information quickly, and briefly tell what's coming up next. Headings make the text look more readable. Poor readers don't organize well. By grouping information under headings, the information is easier to read and remember. Use short, explanatory headings that express a complete thought, rather than single words, which are not specific enough. Headings should summarize and emphasize important information.

Layout - How the Eye Reads a Page

When we look at a page, our eyes "scan" in the direction of the arrows, from the upper left corner, to the right upper right corner, diagonally down to the left corner, and across to the right corner.

This eye movement makes the upper left corner a good place to put important information. The center of the page is usually lost to the reader unless it is made eye-catching with the use of bolded or boxed text, illustrations, or color.



White Space

Balance illustrations and words with white space (space with no text or illustrations). Lots of white space and wide margins can reduce the appearance of clutter and make the brochure easier to read. Paragraphs and topics should be separated with a line, and the lines within a paragraph should be at least single spaced.

Justification

Make the left edge of the text justified and leave the right edge of the line ragged.

Example:

Difficult to read:

It is our hospital policy that everyone, including all health care workers, wash their hands before and after contact with patients. Hand hygiene--keeping our hands clean-- saves lives. There will be soap or alcohol gel or foam at all patient care areas.

Easier to read:

It is our hospital policy that everyone, including all health care workers, wash their hands before and after contact with patients. Hand hygiene--keeping our hands clean -- saves lives. There will be soap or alcohol gel or foam at all patient care areas.

Font/Type Face and Style

Select text that is inviting, visually appealing, and easy to read. If text appears too dense, people will be less likely to read it. Avoid using text that is in all caps. Instead use a mixture of upper and lower-case caps. Finally, limit the number of fonts and their variations; too many can be distracting.

Example:

Difficult to read:

THIS IS THE HARDEST OF ALL PRINTS TO READ BECAUSE IT IS WRITTEN IN ALL CAPITAL LETTERS. PEOPLE WHO STRUGGLE TO READ WILL FIND IT VERY HARD TO READ SOMETHING WRITTEN LIKE THIS.

Italics are harder to read than plain typeface. Sometimes italic typefaces are used effectively in short bursts for emphasizing a point.

Handwriting/script is also very difficult for problem readers to read.

Sans Serif Fonts like this don't give the eye any "handles" to grasp. Research shows that the eye "slips" off the line of type and that even good readers lose interest.

Easy to read:

Mixed Case Serif Fonts (serifs are the little bars on the bottoms and tops of letters), are the easiest of all typefaces to read. This is 12 point Times New Roman.

Font/Type Size

Type size should be as large as possible (at least 12 point; 14-16 is preferred). The larger the size, the easier it will be to read.

Example:

Difficult to read: 8-point type.

9-point type.

10-point type.

Easy to read:

12-point type.

13-point type.

14-point type.

Highlights/Cues and Color

Use typographic cues such as bolding, underlining, size, and color to emphasize key points. Use visual cues like shading, boxes, and arrows to direct the reader's attention to specific points or key content.

Use color to highlight, add clarity, differentiate, focus the eye, and make images more realistic. Use color carefully. It should support, not detract from, the message. When using color, keep in mind that age, gender, and ethnic preferences for color vary markedly.

Graphics

A picture is worth a thousand words. Studies suggest that visual presentations are 43% more persuasive than presentations without visuals. The memory systems in the brain favor visual storage. When we visualize a message, we remember it better than if we read it or hear it. In addition, carefully selected and placed illustrations can make the text more meaningful and inviting to the reader. Graphics should not be used for decoration. They should be used to emphasize, clarify, explain, or reinforce the text.

Advantages of Graphics:

1. Help the reader concentrate on the main message.
2. Reduce the amount of text.
3. Provide visual cues and interaction.
4. Provide motivation.
5. Show step-by-step procedures and make an entire action sequence easier to learn.
6. Carry memorable emotional messages which far surpass words.
7. Show concepts that are hard to put into words.

Relevance

Graphics should be used that are relevant to the topic and audience. Use graphics that reflect the culture, age, gender, and background of the audience. Show people that look like they could be family or friends and objects that look familiar.

Example:

If you are developing a brochure on exercise and your target audience is the low-income, consider the sports that are easily accessible and familiar to the audience. An expensive sport like skiing may not be a good representation of exercise for your target population.

Graphics should support, emphasize, and reinforce important points rather than compete with them. Avoid using graphics in your document for the sake of having graphics. If they do not support or reinforce your main points, don't use them. Unnecessary graphics can be distracting.

Clear and Recognizable Graphics

Brochures should contain simple, basic line drawings that are free from clutter and distraction. Nonessential details such as room background, elaborate borders, and unneeded color should be eliminated. Abstract or stylized graphics lack realism and should be avoided. Photographs often carry too much detail which may be distracting. They can also be expensive to use. Finally, avoid poor reproductions.

Never *ever* make a copy of a copy of a copy of a copy of a copy!

Use graphics that are familiar and easily recognized by the audience. Diagrams, graphs, and other complicated or technical visuals should be avoided. Readers may not be able to interpret them.

Example:

Choose the graphic on the right over the one on the left for use in brochures about medicine.

Example of poor graphic choice:



Example of better graphic choice:



Captions

Captions used with graphics help the reader to quickly tell what the graphic is all about. Write captions that describe the graphic and help the reader remember key points.

Placement

Graphics should be placed in a centralized location and spread evenly throughout the brochure. You need to balance graphics with white space and the text. For multi-page documents, each page should contain an appropriate graphic.

Cover Graphics

Graphics should be used to grab the reader's attention. A good way to do this is to use a cover graphic. People do judge a book by its cover. The cover image often is the deciding factor in a reader's attitude toward and interest in a brochure. The cover graphic should be friendly and recognizable, attract attention, and clearly portray the purpose of the brochure.

Action-Oriented Graphics

Use graphics that focus on the action patients should take. People are more likely to take action if they see that the action is reasonable and doable. Graphics should show specific examples of the desired behavior described, not those to be avoided. If the behavioral objective is to increase physical activity, include graphics that depict people being active rather than sedentary.

Example of poor graphic choice:



Example of better graphic choice:



Anatomical Graphics

Any graphics depicting body parts need to be shown in the context of the full body:

Example of poor graphic choices:



Example of better graphic choices:



Prescription Label Graphics

Graphics included with prescription directions are often used to instruct the patient on how to take the medication. When these graphics illustrate something that the patient should avoid, it should be made very clear that the action is discouraged.

Example:

Incorrect: Do not eat any dairy products like milk, cheese, eggs or yogurt with this medicine.



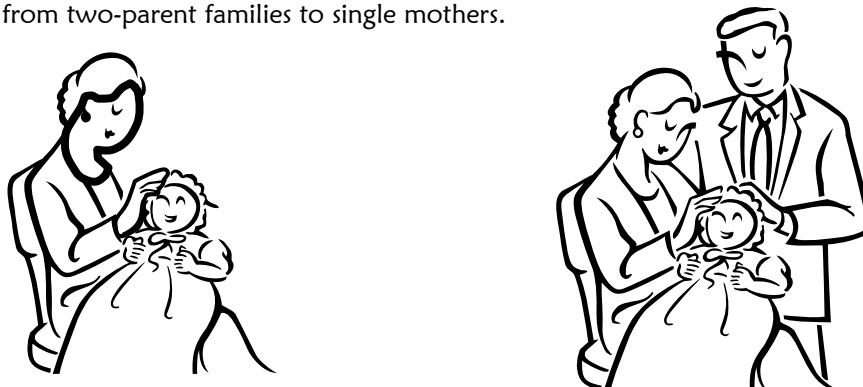
Correct: Do not eat any dairy products like milk, cheese, eggs or yogurt with this medicine.



Graphics on a Budget

There are many ready-to-use graphic designs in computer software programs and clip-art packages, as well as on the Internet. Even if an image varies slightly from what you need, you may be able to alter it using drawing or photo software (such as Microsoft Paint, Adobe Illustrator or Photoshop), correction fluid, or scissors. Use a scanner to insert pictures or photos into print materials. For people who do not have access to these resources, actual “cut & paste” layouts can give very professional results.

Example: Deleting the man in the drawing below can change the audience of this piece from two-parent families to single mothers.



Interaction

Interaction is a very effective way to increase the success of your teaching materials. When the reader interacts with the information provided in the brochure, he/she is motivated and likely to remember the information.

Types of Interaction

1. Questions

Write a short question and leave a blank line for the reader to write the answer.

Example:

What is your goal weight? Write it here.
My goal weight is _____ pounds.

2. Problem Solving

Pose a problem and ask the reader to write or say how the problem can be resolved.

Example:

What are you going to do when you have a craving for a cigarette?
Write down some ideas here.

1. _____
2. _____
3. _____

3. Word/Picture Association

Ask the reader to circle one among several pictures to associate an abstract concept like “physical activity” with a concrete action.

Example:

Circle what you will do to get more aerobic exercise



Step 3: Revising the Brochure

The revision step of the development process should not be neglected. This is the stage where you want to take a long, hard look at your creation before you spend a lot of money on brochure production.

At this stage, do the following:

1. Put a draft of the brochure aside for a day or two and then read it.
2. Review the brochure for grammar and language use.
3. Have other technical experts read the brochure.
4. Have members of the target audience read the brochure.
5. Plan a revision schedule. Decide how often materials will be updated (e.g., yearly)

Step 4: Formatting the Brochure

Once the text of your brochure has been written and you've selected some graphics, it is time to format the brochure. You may want to consider using a desk-top publishing, graphic design expert within or outside of your own organization to assist with this process.

Step 5: Pre-testing the Brochure

Prior to sending your formatted brochure to the printer for mass printing, test a draft of your brochure with members of your target audience. This will help ensure that your brochure is understandable, relevant, attractive, and credible. Pre-testing will also allow you to assess your brochure's strengths, weaknesses and appropriateness to the target audience.

There are several ways to pretest brochures. Here are a few methods of pre-testing:

Focus group:

A focus group is a qualitative means of evaluating the look, content, or any aspect of your brochure. A focus group brings together 8-12 individuals who are representative of your target audience. A series of discussion questions are created and a facilitator leads the discussion. The point is to be as non-directive as possible and to obtain from your participants their attitudes, feelings, and comments. The person leading the focus group must have excellent group facilitation skills and must be impartial to any comments made.

Survey:

A survey can be used to obtain quantitative or qualitative feedback on your brochure. It is very difficult to write survey instruments correctly and care must be taken to determine how the information will be utilized and if you are obtaining the information you need to know.

Face-to-face interviews:

Face-to-face interviews can be administered like a survey except that the questions are read aloud and the respondent is asked to choose the most appropriate answer. Another method of interviewing is an in-depth interview that can allow for more open-ended responses in order to gain more qualitative information.

Regardless of which method you choose, it is important that you are consistent in your methods. Once you have chosen a format or methodology, stick with it throughout pre-testing.

The following is an example of a written survey form that can be used to field test a brochure:

Example:

Here's What I Think

Here are some words that may describe your thoughts as you read this brochure. Put a circle around the words that will tell us what you think about it. It's OK to be very honest. If there are other words that describe your feelings, write them at the bottom of the page. Thank you.

About Right

Interesting

Already know it

Inviting

Attractive

Old Stuff

Boring

Practical

Bossy

Snobbish

Clear

Talks Down

Dull

Too Long

Friendly

Would Read It

Hard to Follow

Wouldn't Read It

Helpful

Useless

Important

Informs

Brochure Development Checklist

Step 1: Planning the Brochure

- Identify the Resources Needed
- Define the Target Audience
- Define the Goals and Objectives
- Determine the key concept and messages
- Research the Topic
- Develop an Outline
- Involve the Target Audience and Other Experts in the Topic Area
- Define the Distribution Plan
- Identify the Look and Design of the Brochure
 - Size; layout; type; color; paper; graphics

Step 2: Writing the Brochure

- Content
 - Purpose/objectives; relevance; cultural, gender, and age appropriateness; scope; accuracy; tone and appeal; recognition
- Literacy Demand
 - Reading level; vocabulary/language use; clarity; sentences/paragraphs
- Spelling
- Organization and Format
 - Context; sequence; grouping or “chunking”; titles; headings; layout; white space; justification; font/type face and style; font/type size; highlights/cues and color
- Graphics
 - Relevance; clear and recognizable graphics; captions; placement; cover graphics; action-oriented graphics; anatomical graphics; prescription-label graphics; graphics on a budget
- Interaction
 - Questions; problem solving; word/picture association

Step 3: Revising the Brochure

- Proofread a draft of the brochure
- Have other technical experts read the brochure
- Have members of the target audience read the brochure
- Plan a revision schedule with date of future updating

Step 4: Formatting the Brochure

- Secure in-house desk-top publisher or contact outside agency

Step 5: Pre-testing the Brochure

- Test the appropriateness, relevancy, and appeal of the brochure with the target audience

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Clip Art Resources

Centers for Disease Control and Prevention

The Center for Disease Control's public health image library has a variety of images relating to public health. <http://phil.cdc.gov/Phil/default.asp>

Getty Images

Search under "healthcare/medicine" for health-related clip-art. Images from this site can be purchased. <http://creative.gettyimages.com/source/home/home.aspx>

Gif Art

This site requires a monthly or annual subscription. It provides thousands of health-related images. http://www.clipart-directory.com/graphics/Clip_Art/medical_Clip_Art_Science-Health-Medicine.html

Johns Hopkins University

This database of clip-art is from Johns Hopkins Center for Communication Programs' Health Communications Network. <http://www.hcmn.org/clipart>.

Liquid Library

Search under "healthcare/medicine" for health-related clip-art. Images from this site can be purchased. <http://www.liquidlibrary.com>

Multimedia and Web Services Anatomy Clip-Art

This Web-site features an electronic gallery of high-quality images from various medical fields. <http://www.uthsca.edu/mw/illustration-about.aspx>

SLS Medical Clip-Art

This site has some free medical clip-art that can be used provided the user gives a reference to their site.

<http://www.angelfire.com/art2/sls/>

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Websites

AMA Foundation Health Literacy Initiative

<http://www.ama-assn.org/ama/pub/category/8115.html>

The AMA Foundation is working to raise awareness among health care providers about the link between health and literacy. Their website includes a toolkit, a train-the-trainers seminar, and a grants program.

Ask Me 3

<http://www.askme3.org>

An initiative to improve health communication between patients and providers: Partnership for Clear Health Communication.

The California Health Literacy Initiative

<http://cahealthliteracy.org/healthliteracyresourcecenter.html>

This initiative serves the state of California and offers a wide range of health literacy information and services.

Current Bibliographies in Medicine/Health Literacy

<http://www.nlm.nih.gov/pubs/cbm/hliteracy.html>

This site is part of the National Library of Medicine Database, and has a large amount of background information about health literacy.

Rollins School of Public Health of Emory University

www.HealthCommKey.com

This is a free online database offering thorough summaries of studies relating to health communication.

Health Literacy Studies/Harvard School of Public Health

<http://www.hsph.harvard.edu/healthliteracy>

This site has information for researchers and practitioners in the public health, medical, and adult education fields. You can find the following health literacy materials: power point overview, preview of a new video, curricula, literature review, annotated bibliography, and links to related sites. Of special interest to literacy teachers and learners is a listing of links to Easy-To-Read health information sites, grouped by health topic.

Medical Library Association Health Information Literacy

http://www.mlanet.org/resources/healthlit/tfhil_info.html

This site includes resources for health information professionals and consumers.

National Institute for Literacy

<http://novel.nifl.gov>

The National Institute for Literacy is a government-administered group that supports and encourages efforts to provide a high-quality system for adult literacy. The site includes information about NIFL programs and services, and also provides information about policy, legislation, and programs related to literacy.

Pfizer Clear Health Communication Initiative

<http://www.pfizerhealthliteracy.com/>

Pfizer has supported research (in both academic and clinical settings) to determine the causes of inadequate health literacy, the scope and impact of the problem, and begin to develop solutions that center around clear communication.

Appendix A

Readability Formulas

(From *Teaching Patients with Low Literacy Skills*)

Readability formulas offer the health care provider an easy-to-use method to assess the reading difficulty of most print materials. In this section you will learn to use a readability formula.

What do they measure?

Readability formulas can be applied to prose -- that is, running text -- but not to tables, charts, or word lists. At least 40 different readability formulas are reported in the literature. Most of the 40 formulas are based on just two factors: word difficulty and sentence length. These formulas say that: "The greater the number of multi-syllable words, the greater the reading difficulty. Also, the longer the sentences, the greater the reading difficulty." Differences among the many formulas are mostly in the sample size and in the mathematical coefficients applied to the two factors.

Application of these two factors in a readability formula provides a grade-level rating. You can then compare the readability level of the material(s) with the reading skills of your patient population to determine suitability.

Knowing how to determine the readability level of your materials is critical to you and to your patients. You cannot afford to "fly blind". Health materials at college levels are often given to all patients -- including those who have low and marginal reading skills.

Is it any wonder that patients do not understand? That they do not follow directions for taking medications? That

they miss their appointments?

Assessing readability using the Fry Formula

Nearly all of the 40+ readability formulas provide a reasonably accurate grade level (typically plus or minus one grade level with a 68-percent confidence factor). Among these formulas, the authors recommend the Fry Formula. The Fry is widely accepted in reading literature and among reading professionals and is not copyrighted. This formula applies to grades 1 through 17, and compared to some formulas, the Fry does not require as extensive of a test sample.

It is not necessary to test the readability of every word and sentence. This would be especially tedious in a long booklet. Instead, test three samples from different parts of the instruction. For a very long text, such as a book of 50 pages or more, double the number to six samples.

Select a piece of material that you customarily use with your patients/clients, and follow the five steps given below to determine its reading level using the Fry Formula.

Detailed Directions for the Fry Formula

1. Select three 100-word passages from the material you wish to test. Count out exactly 100 words for each passage, starting with the first word of a sentence (omit headings). If you are testing a very short pamphlet that may have only a few hundred words, select a single 100-word sample to test.

Readability levels may vary considerably from one part of your material to another. Therefore, select the three samples from different content topics, if possible. For example, if a pamphlet includes such topics as the disease process, treatment options, and actions the patient should take, select one sample from each of these topics.

Additional information:

- Count proper nouns
- Hyphenated words count as one word
- A word is defined as a group of symbols with a space on either side; thus “IRA”, “1994”, and “&” are each one word.

2. For each 100 words, count the number of sentences you have. Then estimate the fractional length of the last sentence to the nearest 1/10. For example, if the 100th word occurs 5 words into a 15-word sentence, the fraction of the sentence is 5/15 or 1/3, or 0.3.

3. Count the total number of syllables in each 100-word passage. You can count by making a small check mark over each syllable. For initializations (e.g., IRA) and numerals (e.g., 1994), count 1 syllable for each symbol. So “IRA” = 3 syllables and “1994” = 4 syllables.

There is a short cut to counting the syllables. Since each 100-word sample must have at least 100 syllables, skip the first syllable in each word. Don’t count it; just add 100 after you finish the count. Count only the remaining syllables (that are greater than one) in the 100-word sample. Thus, you don’t put check marks over any of the one-syllable words; you

put only one check over each two-syllable word, two checks over three-syllable words, and so forth.

Occasionally you may be in doubt as to the number of syllables in a word. Resolve the doubt by placing a finger under your chin, and say the word aloud, and count the number of times your chin drops. Each chin drop counts as a syllable.

4. Calculate the average number of sentences and the average number of syllables from the three passages. This is done by dividing the totals obtained from the three samples by 3 as shown in the example below.

Examples:

	Number of Sentences	Number of Syllables
1st 100 Words	5.9	124
2nd 100 Words	4.8	141
3rd 100 Words	6.1	158
Totals	16.8	423
Divide Totals by 3	5.6	141
	Average	Average

5. Refer to the Fry graph. On the horizontal axis, find the line for the average number of syllables (141 for above sample). On the vertical axis, find the line for the average number of sentences (5.6 for the example). The readability grade level of the material is found at the point where the two lines intersect.

In the example above, the Fry chart shows the readability level at the 8th grade (see dot at the intersection in Figure 4-2). The curved line through the center of the Fry graph shows the locus of greatest accuracy. With a little practice, the five-step process will become much easier. You will soon be able to determine a readability level in less than 10 minutes.

Fry Readability Graph

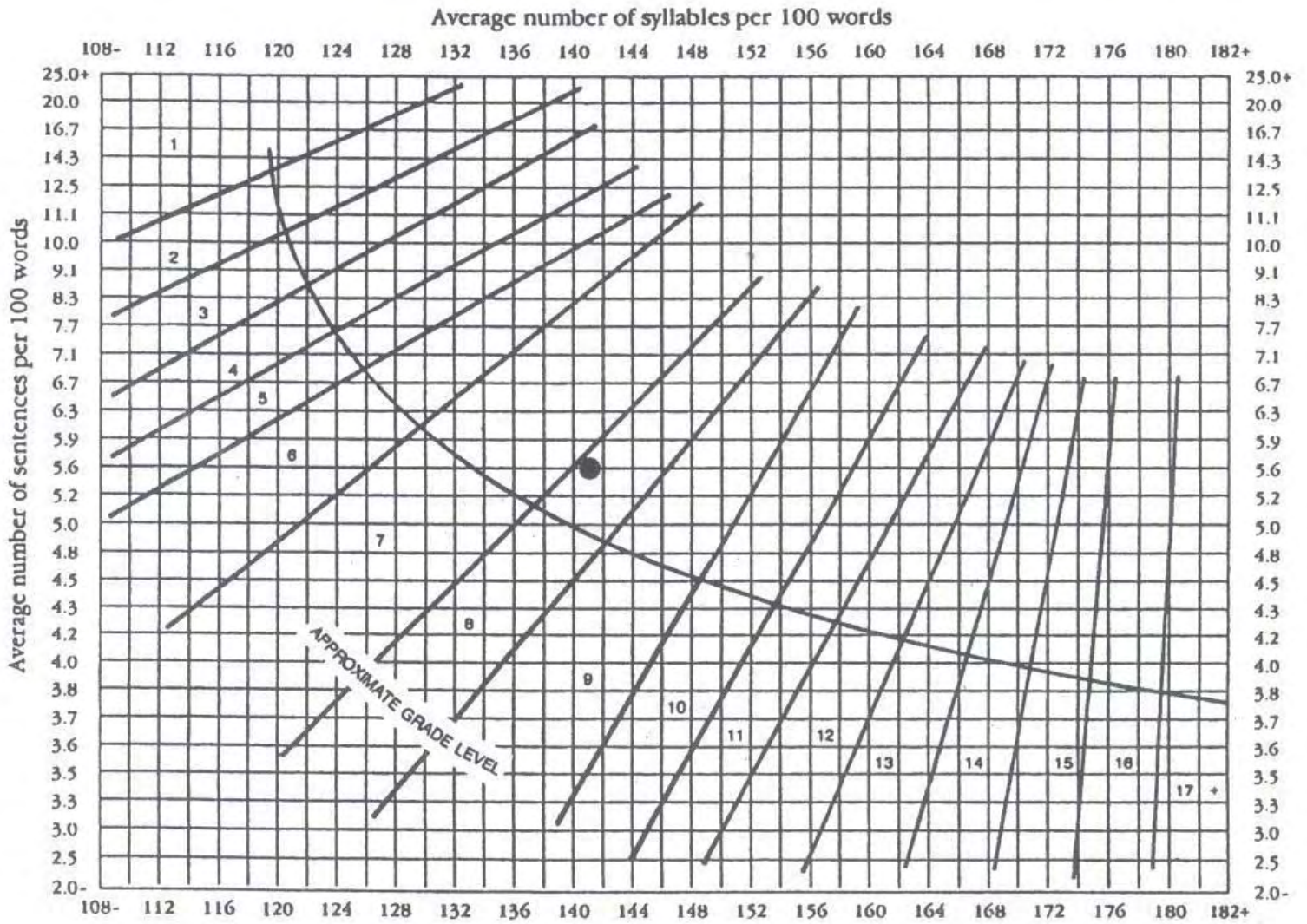


FIGURE 4-2

Fry graph for estimating readability—extended

Appendix B

Rewrite of a Brochure

Original:

Here is an example of a medical brochure that is difficult to understand because it is complex and written at a high reading level.

Drug Function

Complex medical term or jargon

An erection is the result of an increase in blood flow into certain **internal** areas of the penis. Viagra works by **enhancing** the effects of one of the **chemicals** the body normally release into the penis during sexual **arousal**. This allows an increase of blood flow in the penis. If you have trouble getting an erection, Viagra is a pill that may be able to help. This pill will increase blood flow to the penis so that you can maintain an erection. It does this by inhibiting the **PDE5 enzyme and decreasing systemic levels of cGMP**. Viagra can also increase sexual satisfaction and arousal. Your sex life will be better and you will be a happier person.

Proper Use

Fact???

Passive voice

Viagra is taken orally as a once daily dose one hour before sexual activity. You should take Viagra as needed, not to exceed once per day. You can take Viagra on an empty stomach. Do not eat a **high fat meal** when taking Viagra or it will not work as well.

Abstract Concept

Talk to your doctor about Viagra. He or she will know how many pills you should take.

Potential Side Effects

Viagra can cause some uncomfortable side effects. These include headaches, nausea, urinary tract infection, dizziness, facial flushing, rash, **dyspepsia and diarrhea**, **visual disturbance**, and **rhinitis**.

Contraindications and Drug Interactions

Ask your doctor if you should take Viagra if you have heart problems, stroke, or high blood pressure or are taking drugs for any of these health problems.

Use If before Then

Availability and Cost

Viagra is a prescription drug available at most local drug stores or pharmacies. Viagra usually costs \$1.25-3.75 per dose (pill), and may be covered by your insurance.

Readability = 11



Rewrite:

This brochure can be rewritten to make it more easily understood by a patient audience. This rewrite eliminates the use of complex terms and medical jargon, and presents information in a clear, direct manner.

What is Viagra? How does it work?

Viagra is a pill for men who are not able to have an erect (hard) penis. This pill makes blood flow to the penis so that you can have sex.

How do I use Viagra?

You should take one pill one hour before you have sex. Try to take it on an empty stomach. Do not take Viagra more than one time a day. Ask your doctor about the best way to take Viagra.

Other tips from my doctor or pharmacist

What about Viagra and the other drugs I take?

If you are taking drugs for:

- heart problems,
- stroke, or
- high blood pressure,

ask your doctor if Viagra is right for you.

Will Viagra cause any health problems?

For some men, Viagra may cause:

- headaches
- an upset stomach
- dizzy feelings
- rashes
- blurry eye sight
- a stuffy or runny nose

Where can I get Viagra? How much does it cost?

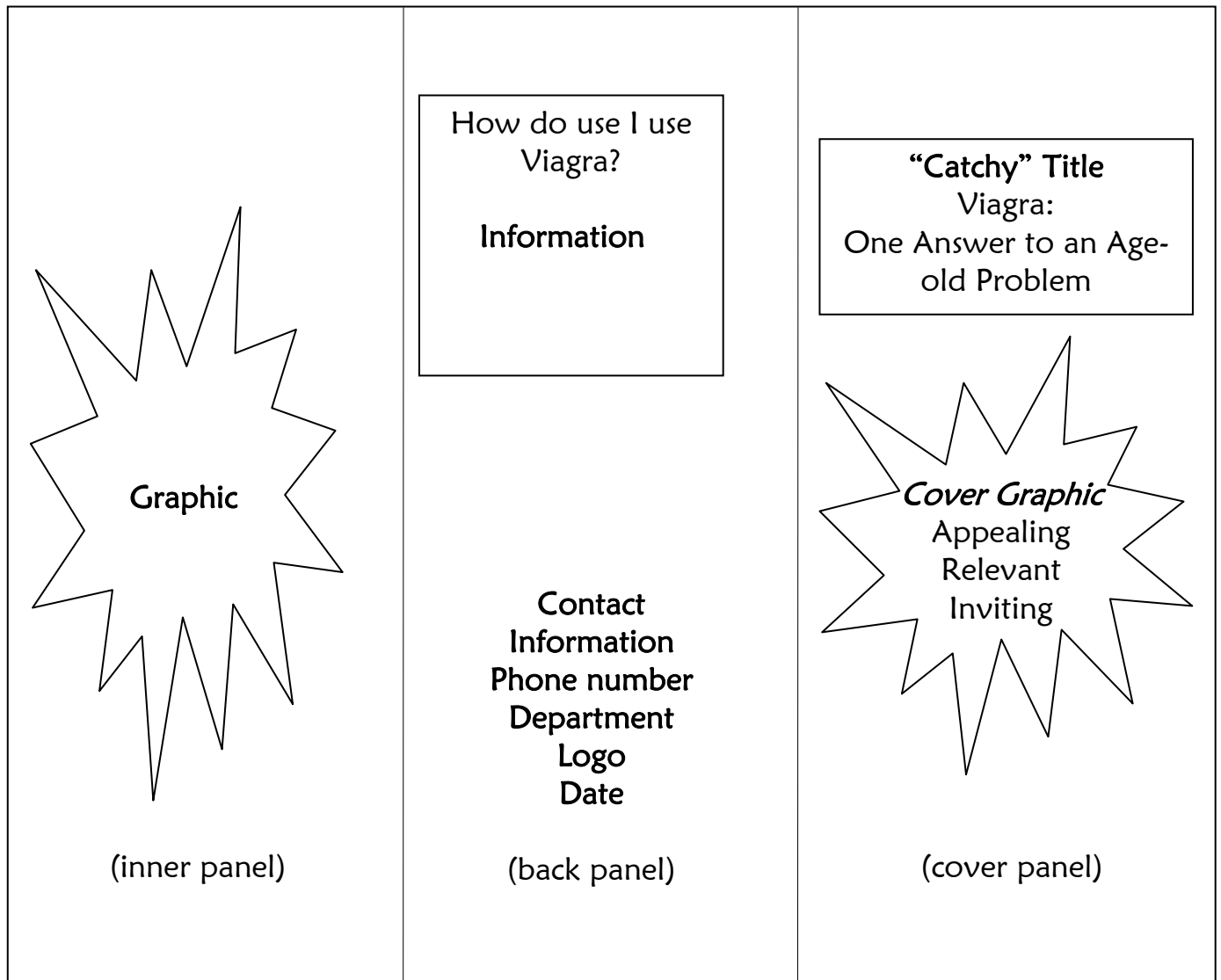
Your doctor must write you a prescription for Viagra. Viagra costs \$1.25-3.75 per pill at most drug stores.

Readability = 5

How to Create Your Own:

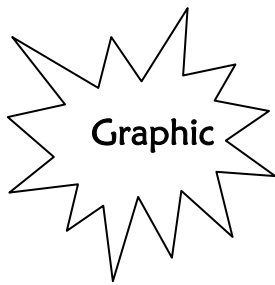
Here is an example of how to lay out and create a simple, readable 6-panel brochure using the above information and the techniques learned in this Manual.

Step 1: Create a layout

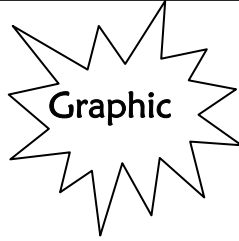


What is Viagra? How does it work?

Information



(inner panel)



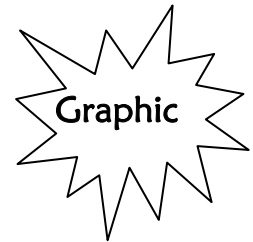
Will Viagra cause any health problems?

Information

(inner panel)




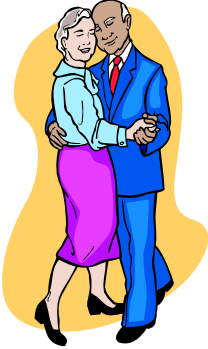
Can I take Viagra with the other drugs I have to take?

Information



(inner panel)

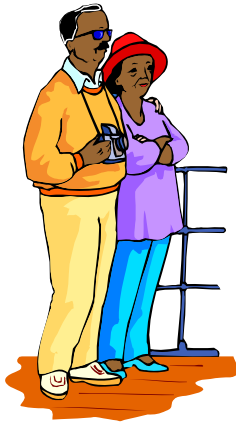
Step 2: Fill in title, information, and graphics

 <p><i>Now there's help for men with Erectile Dysfunction</i></p>	<p>How do I use Viagra?</p>  <ul style="list-style-type: none">- Take one pill one hour before you have sex.- Do not take Viagra more than one time a day.- Take Viagra on an empty stomach.- Ask your doctor about the best way to take Viagra. <p>Other tips from my doctor: _____ _____</p> <p>If you have questions about Viagra or other topics on men's health call:</p> <p>Clinic Health Educators (404) 616-1234</p> <p>Grady Health System®, GU Clinic 2003</p>	  <p>One Answer to an Age-Old Problem</p>
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What is Viagra? How does it work?

Viagra is a pill for men who are not able to have an erect (hard) penis.

This pill makes blood flow to the penis so that you can have sex.



Will Viagra cause any health problems?

For some men, Viagra may cause:

- headaches



- upset stomach



- dizzy feelings



- rashes



- blurry eye sight



- a stuffy or runny nose



What about Viagra and the other drugs I take?

If you are taking drugs for

- heart problems,
- stroke, or
- high blood pressure

ask your doctor if Viagra is right for you.



**Where can I get Viagra?
How much does it cost?**

Your doctor must write you a prescription for Viagra.

Viagra costs \$1.25 to \$3.75 each pill at most drug stores and pharmacies.