TOOLKIT for Making Written Material Clear and Effective

SECTION 2: Detailed guidelines for writing and design

PART 5

Understanding and using the "Toolkit Guidelines for Graphic Design"

Chapter 8

Guidelines for forms and questionnaires

U.S. Department of Health and Human Services
Centers for Medicare & Medicaid Services

TOOLKIT Part 5, Chapter 8

Guidelines for forms and questionnaires

List of figures in this chapter:

This document is the last of eight chapters in Part 5 of the *Toolkit for Making Written Material Clear and Effective*. The Toolkit has 11 Parts. It was written for the Centers for Medicare & Medicaid Services (CMS) by Jeanne McGee, McGee & Evers Consulting, Inc. The guidelines and other parts of the Toolkit reflect the views of the writer. CMS offers this Toolkit as practical assistance to help you make your written material clear and effective (not as requirements from CMS).

Introduction

About the Toolkit and its guidelines

The *Toolkit for Making Written Material Clear and Effective* is an 11-part health literacy resource from the Centers for Medicare & Medicaid Services (CMS). To help you develop or revise your written material, the Toolkit includes detailed guidelines for writing and design. There are 26 guidelines for writing and 46 for graphic design. For the full list, see Toolkit Part 3, *Summary List of the “Toolkit Guidelines for Writing and Design”*.

About this part of the Toolkit

Part 5 of the Toolkit focuses on the guidelines for graphic design. These guidelines apply to designing various types of written material intended for use in printed formats (see Toolkit Part 1). (For discussion about material that is read on a computer screen, see Toolkit Part 8, *Will your written material be on a website?*)

What is this chapter about?

This is the last of the eight chapters on design in Toolkit Part 5. It explains how to apply the Toolkit Guidelines for forms and questionnaires. For background on things to know about the Toolkit Guidelines for Design, see Toolkit Part 5, Chapter 2, *Guidelines for overall design and page layout*.

What aspects of design are covered in the other chapters?

The other chapters in Toolkit Part 5 cover the following topics: tips for learning about design and working with design professionals (Chapter 1); overall design and page layout (Chapter 2); fonts, size of print, and contrast (Chapter 3); headings, bulleted lists, and text emphasis (Chapter 4); use of color (Chapter 5); use of photographs, illustrations, and clip art (Chapter 6); and tables, charts, and diagrams (Chapter 7).

About forms and questionnaires

This chapter is about designing forms and questionnaires. The unique feature of these formats is that they are designed to collect information from people. Forms and questionnaires are generally either printed or electronic; this chapter focuses on designing printed versions. Typically, printed forms and questionnaires collect information by leaving blank lines or spaces to be filled in, and by setting up things to be marked, such as boxes to check or choices to be circled. Forms and questionnaires can range from brief to lengthy.

Different types of forms and questionnaires are used for different purposes. Here are a few examples:

- **Application forms**. Examples are applications for Medicaid or CHIP (Children’s Health Insurance Program), applications to receive Social Security benefits, and applications for Medicare supplemental health insurance.

- **Information forms used for reference**. Examples include wallet cards with emergency health information and logs of blood sugar records kept by people with diabetes.

- **Permission forms**. Examples are informed consent forms for medical treatment and forms that give school staff permission to administer medications to children during school hours.

- **Other types, such as questionnaires and worksheets.** Examples are health history questionnaires for patients and worksheets that help people do numeric calculations.

Why work on improving your forms and questionnaires?

When forms are not working well, the costs can be substantial

Many forms are too difficult for people to understand and complete. The purpose is unclear, the instructions are difficult, it’s hard to know what the questions are asking, and the page is crowded with little space available for writing down an answer. People get confused, discouraged, and frustrated. They make mistakes. They skip parts they don’t understand. They may delay in finishing the form, or maybe they give up altogether.

When forms are too difficult, the resulting errors and missing information cause a lot of problems for the agencies that are using the forms to collect information. Staff must spend more time answering questions, providing assistance, and correcting errors and problems. The need to follow up on problems caused by poorly designed forms and questionnaires takes them away from other work. Resources are wasted because people make mistakes and then have to fill out the same form again. When there are mistakes or delays in processing the information, clients may go without vital services they need.

> "It has been estimated that for every dollar spent on producing a form, $20 to $97 will be spent to complete, handle, process, and store it. Forms with errors can cost up to 10 times more to process. Therefore, it is important that we pay attention to how we create forms and reduce the costs associated with processing them."

Source: *Creating Plain Language Forms for Seniors*
(Canadian Public Health Association, 1998:1). Used with permission.

There's a strong business case for improving your forms

A project by the National Literacy and Health Program and the Canadian Public Health Association studied the costs associated with using forms that are too difficult for people to understand and complete, and looked at the business case for improving forms. They conducted focus groups with older adults to get their reactions to existing forms. They used the results to identify ways to improve forms, which they summarize in their report titled *Creating Plain Language Forms for Seniors: A Guide for the Public, Private, and Not-for-Profit Sectors*. This report uses a number of examples from Canadian and Australian businesses and governments to document the business case for improving forms.

> ". . . plain language forms and policies make good business sense . . . [there are many] encouraging examples of the huge time and cost savings reported by business and government after switching to plain language forms."

Source: *Creating Plain Language Forms for Seniors*
(Canadian Public Health Association, 1998:3). Used with permission.

Making forms easier to fill out improves the completeness and accuracy of the answers people give. People who fill out the forms are less frustrated, and so are the people who process them. The forms are quicker, easier, and more cost-effective to process, and people get the services they need in a more timely fashion.

The Toolkit Guidelines can help

The guidelines we discuss in this chapter will help you create forms that make it easier for people to provide complete and accurate information that will be easier and more cost-effective for you to process. You can use the guidelines to help create forms that are easy for people to understand and complete because they:

- **Have clear and simple instructions.** People will understand right away what they are supposed to do with the form, and the instructions will anticipate and address any questions that are likely to come up in their minds.

- **Have questions that are easy to understand and answer.** People will be able to focus on giving the answer to the question rather than trying to figure out what the question is asking or what they are supposed to do. It will be easy for them to figure out what to mark or write down. There will be plenty of space to fill in the responses, and if any answer choices are given, they will be clear and make sense.

- **Have a layout that is uncrowded and easy to follow.** People will be able "navigate" through the form without distractions or frustration, moving smoothly from one part to the next.

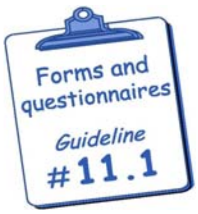
- **Make clear what to do when the form is completed.** People will know what they are supposed to do with it after they fill it out.

Guidelines for forms and questionnaires

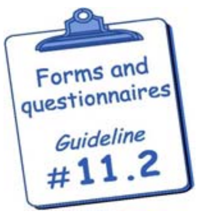
In this chapter, the guidelines we discuss focus on *issues unique to forms and questionnaires*. They are listed below in Figure 5-8-a.

[You will find that many of the other *Toolkit Guidelines for Writing and Design* that we discuss in other chapters also apply to forms and questionnaires, but we don't repeat them here. For the full list of guidelines see Toolkit Part 3, *Summary List of the "Toolkit Guidelines for Writing and Design"*.]

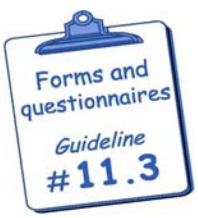
Figure 5-8-a. Toolkit guidelines for forms and questionnaires.



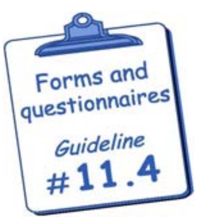
Begin a form or questionnaire with an informative title and brief explanation of its purpose. At the beginning of the form or questionnaire, tell what the document is for and what people should do with it, using words they will understand. Explain any program titles or agency names that may be unfamiliar to them. Explain how the information will be used and, if applicable, how privacy will be protected.



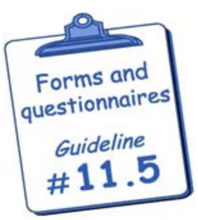
Ask only for information you really need and will definitely use. Filling out a form or questionnaire can be burdensome and time consuming, so keep it as short as you can. Don't collect information that is unnecessary or readily available elsewhere. Ask for each piece of information only one time.



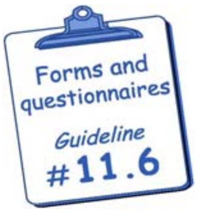
Make the layout clear, uncrowded, and appealing. Do not crowd a form or questionnaire into space that is too small for easy reading and writing. Spreading it out into the amount of space required for easy completion will work better than forcing it to fit into some predetermined length (such as "no longer than one page").



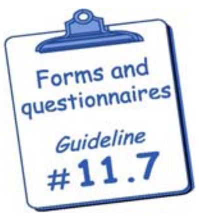
Integrate instructions and explanations into the form or questionnaire, placing them right where they are needed by the reader. Integrating the instructions into your form is a powerful way to show consideration for your readers and improve ease and accuracy of response. Do not use footnotes or asterisks, because many less-skilled readers do not understand their function, and using them adds an extra burden for any reader. At the end, tell readers what to do with the completed form or questionnaire.



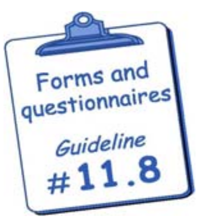
Limit the number of formats for collecting answers and use them in a consistent way. Make the task of supplying information as simple and intuitive for your readers as you can, so that they don't have to stop and think about what you are asking or how to answer. To encourage full and accurate completion, provide clear, complete labels on the fields to be filled in.



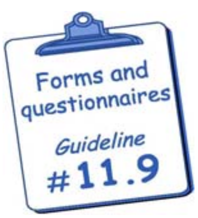
In a form for people with low literacy skills, avoid using a grid or matrix format to collect information. A grid or matrix format has rows and columns. When you use a grid to collect information, readers have to keep looking up at the headings at the top of the columns to understand what you are asking for. To make it easier for people to give accurate answers, consider breaking each part of the grid into a fully labeled separate item.



Create a clear and obvious path through the form that minimizes cross-references and skip patterns. Arrange the items in an order that makes sense to readers and eliminates (or greatly minimizes) the need to skip around among the sections.



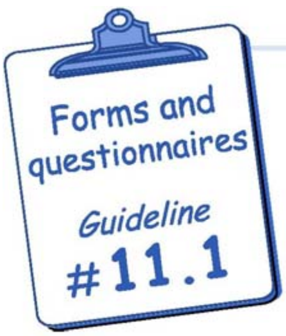
Conduct usability testing. To find out whether a form or questionnaire is working well, conduct usability testing with intended users. Have them fill it out, and then talk with them to get their reactions and suggestions.



Take into account how the form or questionnaire will be produced, distributed, and processed. Work with others to produce a form that is both easy to fill out and easy to process.

Source: Created for this Toolkit. For more about the guidelines and how to use them, see Toolkit Part 3, *Summary List of the "Toolkit Guidelines for Writing and Design".*

Begin with a clear title and statement of purpose



Begin a form or questionnaire with an informative title and brief explanation of its purpose.

At the beginning of the form or questionnaire, tell what the document is for and what people should do with it, using words they will understand. Explain any program titles or agency names that may be unfamiliar to them. Explain how the information will be used and, if applicable, how privacy will be protected.

Provide an informative title

People want and need to know immediately about the purpose of a form or questionnaire, and what they are supposed to do with it. To help them, start by giving the document an informative title that lets them know what to expect. Since the title is probably the first thing people will notice, use it as a way to encourage them and make them feel that the document is going to be easy to understand and use:

- **Avoid using generic titles** such as "application form."
- **Avoid using a terse and bureaucratic-sounding title with difficult vocabulary** (such as the one shown in Figure 5-8-b below, "Health Assessment for Influenza Immunization").
- **Instead create an informative title that uses familiar words and simple syntax** (such as the one in Figure 5-8-b below, "Flu shot form").

Explain the purpose

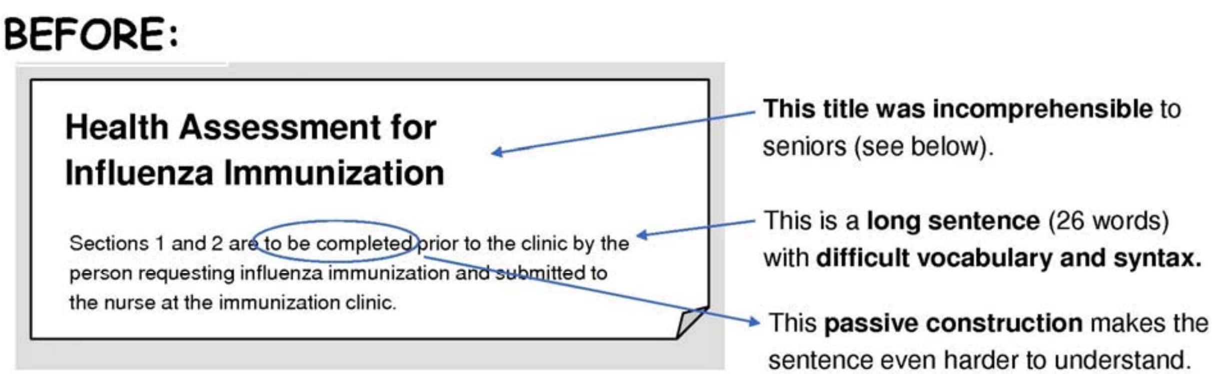
Include an introduction at the beginning of your form or questionnaire. Use this introduction to give your intended respondents clear and simple answers to the questions they are likely to have:

- **Who are you?** Be sure to spell out the full name of organizations, rather than relying on acronyms. Remember that people outside your agency may know you by another name or nickname. If so, include the other names that are familiar to them as well as the "official name." Use program titles and explanations that will be familiar and understandable to your readers, not just to staff.

- **Why are you asking for information and what you will do with it?** Include assurances of privacy if applicable.
- **What do I need to do?** Explain clearly and simply what they are supposed to do with the form. If applicable, explain about the deadline (and what will happen if they don't meet it). Address other questions they may have, such as whether completing the form is voluntary or required. Explain any rights or rules that are applicable.

To encourage a fast and accurate response, put this explanation in a prominent place at the very beginning of the material. Keep it brief, make it easy to skim, and give it a friendly tone. Figure 5-8-b below gives an example of how to turn a difficult and bureaucratic-sounding introduction into one that is easy for people to understand.

Figure 5-8-b. Improving the title and initial instructions on a form.



This form was tested in focus groups with seniors. Results showed that:

- **The vocabulary was too difficult, including most of the words in the title**. Seniors couldn't understand the words *assessment*, *influenza,* and *immunization*. Other hard words include *prior to*, *requesting*, and *submitted*.
- **Using the simple word "clinic" in an unfamiliar way confused them**. Usually, *clinic* refers to a physical place that provides health care. But in health care jargon, *immunization clinic* can mean times when flu shots are available. The example shown above confused seniors by using *clinic* to mean a time rather than a place (it says to complete the sections "*prior to the clinic,"* which means to complete them *before the time you go to have your flu shot*).

AFTER:

Flu Shot Form

This form will tell you if you can have a flu shot at the clinic.

Start by reading Part 1. You will find out if it's okay for you to have a flu shot.

When you finish answering the questions on this form, please give it to the nurse.

The revised **main title** is brief and easy to understand. The **subtitle** that follows helps convey the full meaning of the original title without using difficult words such as *assessment*.

The **initial instructions are rewritten in the active voice using simple words.** They give enough direction to get the reader started. The rest of the instructions are integrated into the form itself, right where the reader needs them.

The last sentence **tells people what to do with the form** when they are finished filling it out.

Source: The text only (not the visual formatting and commentary) has been adapted with permission for use in this Toolkit from a before-and-after example in *Creating Plain Language Forms for Seniors: A Guide for the Public, Private, and Not-for-Profit Sectors* (Canadian Public Health Association, National Literacy and Health Program, 1998:14-15). To help generate the practical advice in this publication, the Canadian Public Health Association National Literacy and Health Program did focus groups with seniors.

Ask only for information that's really necessary

Forms and questionnaires
Guideline #11.2

Ask only for information you really need and will definitely use.

Filling out a form or questionnaire can be burdensome and time consuming, so keep it as short as you can. Don't collect information that is unnecessary or readily available elsewhere. Ask for each piece of information only one time.

Filling out a form or responding to a questionnaire can be burdensome to any reader. Forms or questionnaires that ask for less information are faster and easier to fill out. They are also quicker and easier for you to process.

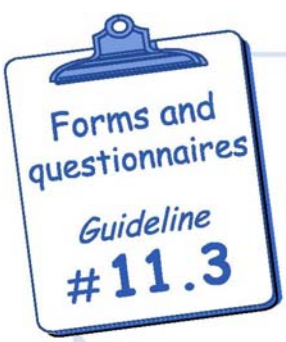
When you are developing or revising a form or questionnaire, here are some things to consider about the information you are planning to collect:

- **Is it really necessary to know?** To justify that a piece of information is needed, be explicit about how you plan to use it. Discussing how you will use the information before you collect it can help you eliminate unnecessary data collection. It also serves as a good check on whether you are collecting each piece of information in ways that make it the most usable (at the right level of detail, etc.).

- **Is it readily available elsewhere?** Sometimes you can streamline your data collection because the information you seek is already available from another source.

- **Are you asking for the same information more than once?** It's annoying to be asked the same question several times in different ways. For example, if you ask for a date of birth, don't ask also for a person's age.

Make the layout clear, uncrowded, and appealing



Make the layout clear, uncrowded, and appealing.

Do not crowd a form or questionnaire into space that is too small for easy reading and writing. Spreading it out into the amount of space required for easy completion will work better than forcing it to fit into some predetermined length (such as "no longer than one page").

Creating a clear, uncrowded, and appealing layout is worth the effort. It will encourage people to supply information that is accurate and complete. This will help you process the completed form or questionnaire more quickly and efficiently.

Here are tips for creating a clear and effective layout:

- **Be sure to allow enough space on the form for people to fill in their answers**. Space that is too cramped causes serious problems both for the person who is filling out the form and for those who are using the information it collects. When there's not enough space to fill in the answer, people may get frustrated, discouraged, or annoyed. They may skip the question, give an incomplete answer, squeeze in an answer that's hard to read, or resort to abbreviations that you cannot decipher. These reactions, in turn, reduce the accuracy of the information. Depending on the purpose of the form, it could cost you a lot of time and money to follow up. Leaving ample room for fill-in answers helps prevent such problems.

- **Be especially generous with the space for fill-in answers if the material is for people with Medicare or other older adults.** Adding extra space for fill-in answers may make the form a little longer, but it's worth it.

- **Make *all* of the text large enough for easy reading, including any legal notices.** Legal notices are sometimes called "fine print" because they are often printed smaller than the rest of the text. Don't do this in your forms and questionnaires. If the text is important enough to include, make it easy for people to read.

For more help on layout, see Toolkit Part 5, Chapter 2 (*Guidelines for overall design and page layout*), Chapter 3 (G*uidelines for fonts (typeface), size of print, and contrast)*, and Chapter 4 (G*uidelines for headings, bulleted lists, and emphasizing blocks of text).*

What about the length of a form or questionnaire?

When you are creating a form or questionnaire, the total length is important. Keeping it as short as you can helps encourage a good response -- provided that the document is easy for people to read and fill out. Ideally, the length of your document will be determined by the amount of space you need to create a clear, uncrowded and appealing layout that accommodates all of the questions you need to ask. But sometimes you may have set a goal for the overall length of your form or questionnaire. Or there may be a maximum length that you cannot exceed due to budgetary or other considerations.

If you want to keep your form or questionnaire to a predetermined length, and you find that the document exceeds this length, what can you do? Forcing the questions to fit into the space available is not a reader-friendly solution.

> "Seniors don't like to see a great deal of text compressed onto one sheet of paper because it overwhelms them. They also prefer a larger font, even if it means filling out more pages."

Source: *Creating Plain Language Forms for Seniors*
(Canadian Public Health Association, 1998:6).
Used with permission.

Crowding too many questions into too little space is likely to be counter-productive for everyone involved. Here are some reasons why crowding your form can lead to confusion, inaccurate information, and missing data:

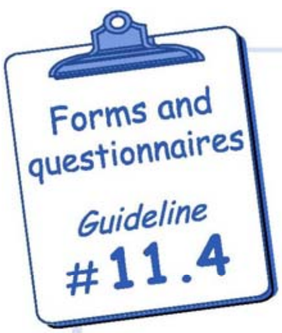
- If you reduce the size of the font to save space, you will make the text harder for people to read.
- If you cut corners on the instructions, you may make the form more difficult. If you make changes to save space that involve dropping or condensing definitions and instructions, or putting them apart from the questions they refer to, you will put a greater burden on respondents. They may get discouraged or confused and give incomplete or inaccurate answers.
- If you save space by giving people less space for filling in an answer, it will be hard for them to squeeze in their answer and hard for you to decipher it.
- If you crowd questions together, removing white space and graphic design elements, you will create an intimidating "wall of words" that makes the document less appealing and harder to fill out.

As you can see from the list above, crowding your form has a negative impact on the respondents and, ultimately, on you as well. While you may save a little on paper, you can create a lot of new problems because you have made the form more difficult. Instead of crowding the form, see if one of these two options might work:

1. **Revisit the questions you want to ask – can any of them be dropped?** If you find that a form runs too long, instead of squeezing everything in, take another look. Try to drop some of the questions. Examine them carefully to see if you are asking for any information that's not really necessary (See Guideline 11-2 above).
2. **Revisit the limit on length - what is the best length, all things considered?** If you cannot drop enough questions to allow for good formatting, consider whether the predetermined length can be expanded. If the desired length is just a goal, ask yourself whether this goal reflects what your

readers really need. For example, people who create forms and questionnaires sometimes think that one page is the magic size. But to respondents, what's important is how easy it is to read, understand, and respond to the first few questions on a page. If the first page of the form is easy for them, whether the form is one or two pages won't matter. If it's *not* easy to answer the first few questions, they will be frustrated in any case, and will not be grateful that you kept the form to just one page.

Keep instructions brief and place them right where they are needed



Integrate instructions and explanations into the form or questionnaire, placing them right where they are needed by the reader.

Integrating the instructions into your form is a powerful way to show consideration for your readers and improve ease and accuracy of response. Do not use footnotes or asterisks, because many less-skilled readers do not understand their function, and using them adds an extra burden for any reader. At the end, tell readers what to do with the completed form or questionnaire.

Many forms put a needless burden on respondents by forcing them to hunt for instructions, definitions, and explanations. For example, instructions that apply to various questions that come later in the form are sometimes grouped together at the beginning. Instructions are sometimes numbered to correspond to the question numbers and then placed in a separate section or on the back of the form.

This common practice of separating the instructions from the questions causes problems:

- **It increases the likelihood that people will *overlook* the instructions**.

- **It increases the likelihood that people may deliberately *skip* the instructions**. When instructions are in a separate section, people have no immediate need to read them, and may just skip over them. Many people like to start right in, without pausing to read a section of instructions, especially if the instructions look long or complicated.

- **It makes it harder for people to *follow* the instructions**. Separating the instructions from the questions they refer to forces respondents to skip back and forth between the instructions and filling out the form. This is frustrating and confusing to anyone, but especially burdensome to less-skilled readers who are apt to lose their train of thought while skipping back and forth.

When people fail to notice or use the instructions, errors and omissions are more likely. When people provide incomplete or inaccurate information, it can cost you a lot of time and resources in following up. So help the respondents and your own agency or organization by keeping the instructions brief and integrating them into the main part of the form:

- **Keep the instructions as short and clear as possible.** When instructions are brief, people are more likely to take the time to read them carefully.

- **Put each instruction right where it is needed**. For example, you might put instructions at the top of a field that’s to be filled in, or integrate them into the question itself. For help in wording your instructions, see the discussion of Guideline 3.4 in Toolkit Part 4, Chapter 3, *Guidelines for writing style*. Guideline 3.4 calls for giving the context first and incorporating definitions and explanations into the text.

- **Do not use footnotes or asterisks**. Consumer testing of written material done by the author and colleagues has shown that people with limited skill and experience in reading don’t understand the function of a footnote. They also tend to be unfamiliar with the use of asterisks or other symbols (such as numbers or small letters of the alphabet) to signal that there is a footnote. Moreover, even skilled readers can easily miss a footnote, especially if it has been formatted in an ineffective way (they are often printed in a font size that is tiny).

Use elaborated instructions that incorporate explanations

Sometimes people appreciate knowing why they are being asked for particular information and how it will be used, especially if it is about a sensitive topic or it seems unrelated to the purpose of the form. Try to anticipate when your readers might have questions or concerns about information requested on a form, and incorporate a comment or explanation.

Figure 5-8-c below shows a few examples. As you can see from these examples, expanding a terse instruction to include the context can change the tone of a form from terse and bureaucratic to friendly and respectful. A better tone may help encourage a higher completion rate and greater accuracy of the information that is collected.

Figure 5-8-c. Use elaborated instructions to provide context and incorporate explanations.

EXAMPLE A: Incorporating definitions and context:

In the space below, write any income you or anyone in your house gets.

Original instructions
They tell what to do, but that's all.

In the space below, write any income you or anyone in your house gets. When we decide if a child should get Medicaid, the income of the child's parents and stepparents is counted. The child's own income is counted, too.

Revised instructions
This version uses the same first sentence, then adds two more sentences of explanation. These elaborated instructions anticipate and answer questions that may come up about what income counts and how it will be used.

EXAMPLE B: Explaining how information will be used

List any expenses for child or adult care.

Original instructions
They tell what to do, but that's all.

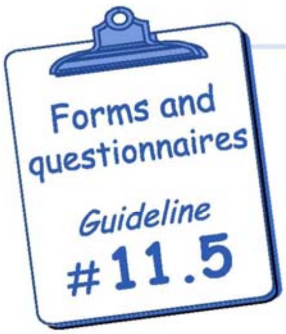
Child and adult care expenses
Please tell us what you pay for child care and adult care. Those expenses are necessary so you can work, and we will subtract (take away) those amounts from your income when we decide if you qualify for this program.

Revised instructions
Notice how adding an explanation changes the tone, making this request for financial information more friendly and informative.

Also, this revision adds a heading to signal the topic. Headings that stand out help readers see at a glance what a form is about and how it's organized.

Source: This example is adapted from work done by Christina Zarcadoolas, Penny Lane, Holly Smith Mirenda, and Mercedes Blanco as part of a project for the Centers for Medicare & Medicaid Services done by the MAXIMUS Center for Health Literacy (visit http://www.maximus.com/services/health/health-literacy).

Limit the number of formats for collecting answers



Limit the number of formats for collecting answers and use them in a consistent way.

Make the task of supplying information as simple and intuitive for your readers as you can, so that they don't have to stop and think about what you are asking or how to answer. To encourage full and accurate completion, provide clear, complete labels on the fields to be filled in.

Keep answer formats simple and consistent

When you are choosing answer formats for questionnaire items, look for ways to keep them simple. Here are some tips:

- **In general, choose the shortest and simplest answer format that will provide the information you need.** For example, it's much easier for people to answer a yes-no question than to respond to a complex rating scale with answer choices they have never seen. When you are choosing an answer format, consider whether it makes distinctions that are finer than your respondents would make and more precise than you need. For example, if all you need to know is whether people have been satisfied or not, why ask people to mark their answer on a rating scale with seven categories that range from 1 = extremely dissatisfied to 7= extremely satisfied?

- **Limit the number of different answer formats you use.** Limiting the number of answer formats eases the cognitive burden on respondents. Switching from one type of format to another forces people to slow down and ponder answer choices that have changed and decide what to mark. Frequent switching of answer formats can make respondents feel discouraged, confused, or frustrated. It can depress the response rate and affect the accuracy of people's responses.

- **Include specific instructions and incorporate any definitions that might be needed.** Tell people how to mark their answers, especially if they might need to mark more than one answer for a question. If a question uses words or terminology that respondents might not understand, include a definition. Put the definition right where they need it, either immediately before the question or incorporated into it.

- **Make it easy for people to tell you when they don't know the answer or when the question doesn't apply to them.** Whenever you can anticipate that a question asks about something people may not know, include a "don't know" option or an answer marked "other" with space for them to fill in. If you do not include other options such as "other" or "don't know," people may just skip the question, and you will not know why. Or they might mark the answer that comes closest, even though it is not accurate.

- **Be consistent in wordings, numbering schemes, and formatting**. When you use a particular answer format, be sure to list the choices in the same order every time you use it. For example, if it's a *yes-no* choice, don't switch between *yes-no* and *no-yes*. When you set up numeric or other rating scales, be thoughtful and consistent in your labeling and in how you position the positive and negative ends of the scale (such as always using the highest number for the most positive response).

Figure 5-8-d below shows a one-page questionnaire. It illustrates how to apply many of these recommendations for choosing a limited number of formats for collecting answers and using them in a consistent way.

Figure 5-8-d. Sample questionnaire with examples of formatting.

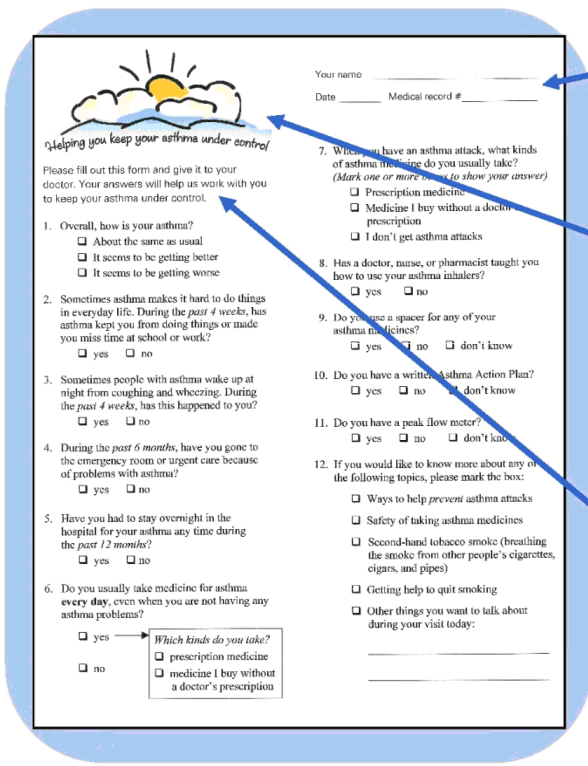
The questionnaire below is designed for people with asthma to fill out at the doctor's office while they are waiting to be seen.

The overall design and layout make a good first impression:

It looks uncrowded and reasonably short (only 12 questions on one page).
It looks like it will be easy to read and easy to mark the answers.

Overall, the layout has an organized and tidy look and it's easy to skim:

- Strong and consistent alignments. The coulmns and question numbers stand out clearly.
- Indenting the check boxes under each question creates a visual unit for each question, making the questionnaire easy to skim.
- Ample white space around the edges and between the questions.



Helping you keep your asthma under control

Please fill out this form and give it to your doctor. Your answers will help us work with you to keep your asthma under control.

Your name ______________

Date ________ Medical record # ____________

1. Overall, how is your asthma?
   - ❑ About the same as usual
   - ❑ It seems to be getting better
   - ❑ It seems to be getting worse
2. Sometimes asthma makes it hard to do things in everyday life. During the *past 4 weeks*, has asthma kept you from doing things or made you miss time at school or work?
   - ❑ yes ❑ no
3. Sometimes people with asthma wake up at night from coughing and wheezing. During the *past 4 weeks*, has this happened to you?
   - ❑ yes ❑ no
4. During the *past 6 months*, have you gone to the emergency room or urgent care because of problems with asthma?
   - ❑ yes ❑ no
5. Have you had to stay overnight in the hospital for your asthma any time during the *past 12 months*?
   - ❑ yes ❑ no
6. Do you usually take medicine for asthma **every day**, even when you are not having any asthma problems?
   - ❑ yes → *Which kinds do you take?* ❑ prescription medicine ❑ medicine I buy without a doctor's prescription
   - ❑ no
7. When you have an asthma attack, what kinds of asthma medicine do you usually take? *(Mark one or more boxes to show your answer)*
   - ❑ Prescription medicine
   - ❑ Medicine I buy without a doctor's prescription
   - ❑ I don't get asthma attacks
8. Has a doctor, nurse, or pharmacist taught you how to use your asthma inhalers?
   - ❑ yes ❑ no
9. Do you use a spacer for any of your asthma medicines?
   - ❑ yes ❑ no ❑ don't know
10. Do you have a written Asthma Action Plan?
    - ❑ yes ❑ no ❑ don't know
11. Do you have a peak flow meter?
    - ❑ yes ❑ no ❑ don't know
12. If you would like to know more about any of the following topics, please mark the box:
    - ❑ Ways to help *prevent* asthma attacks
    - ❑ Safety of taking asthma medicines
    - ❑ Second-hand tobacco smoke (breathing the smoke from other people's cigarettes, cigars, and pipes)
    - ❑ Getting help to quit smoking
    - ❑ Other things you want to talk about during your visit today:

____

____

The receptionist or nurse will fill this part in (date, name of patient, chart number) before giving it to the patient.

The clip art with a motto underneath *("Helping you keep your asthma under control")* adds upbeat visual interest and a strong point of entry into the page.

It starts by explaining its purpose, emphasizing the key message of working together to keep asthma under good control.

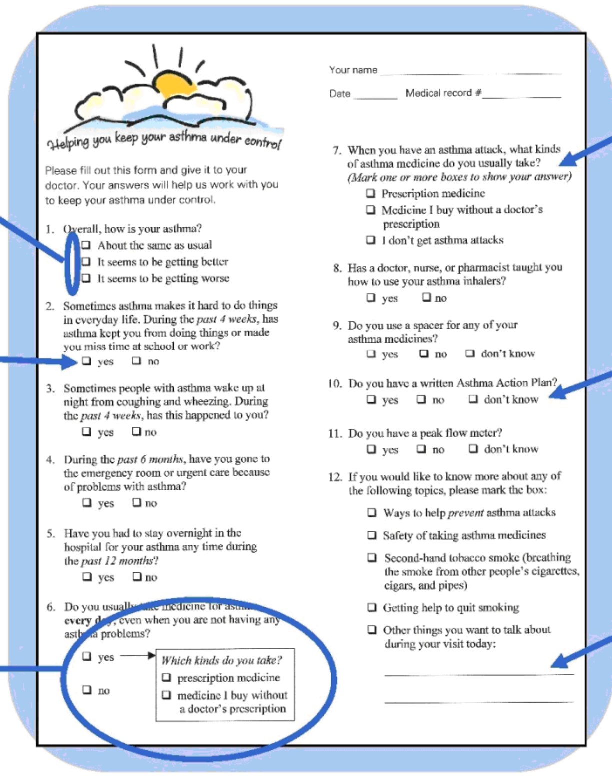
Figure 5-8-d, continued.

It has mostly yes-no questions, and it uses check boxes for nearly all of the answer choices.

Indenting the column of check boxes under each question strengthens the visual link between each question and its answer choices.

Ideally, the check boxes for *yes* and *no* would be stacked like the other check boxes. Instead, they are on a single line to save space.

Avoids a skip pattern by using an arrow leading to a boxed-in follow-up question. For more about this and a close-up view, see Figure 5-8-f later in this section.



This question includes specific instructions about marking "one or more boxes."

"Don't know" is included as an answer choice for questions where the respondent might not have an answer or might be unfamiliar with a term.

Lines for this fill-in answer at the end allow enough space for easy writing.

Figure 5-8-d, continued.

Give respondents an easy way to tell you that a question does not apply to them.

Answer choices such as "not applicable" or "does not apply" can be hard for readers with low literacy skills to understand.

Instead of using "not applicable" or "does not apply," it may work better to create a customized version of "not applicable," using words that fit with the question. Some researchers call this type of answer option a "tailored not applicable." The question below gives an example.

This last answer choice is worded to make it easy for respondents to say that the question does not apply to them. It uses familiar words that reflect the topic of the question.

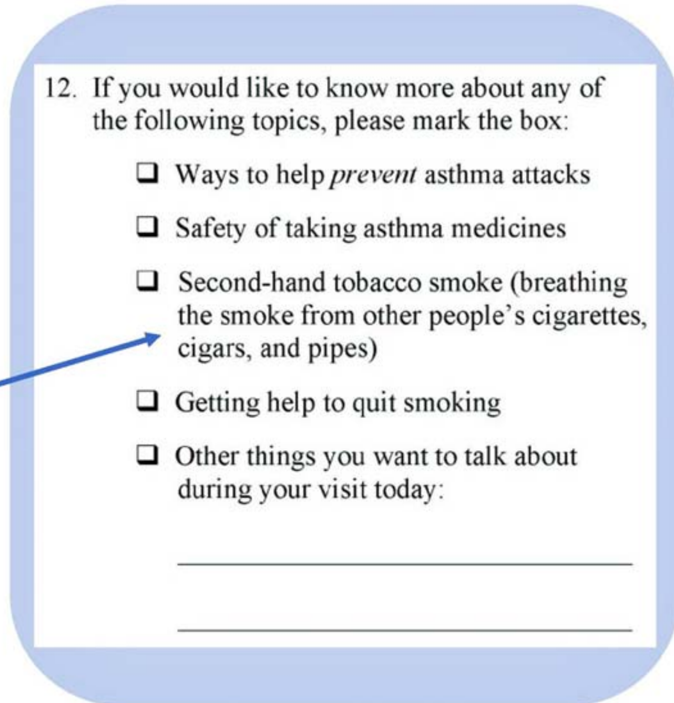
7. When you have an asthma attack, what kinds of asthma medicine do you usually take?
(Mark one or more boxes to show your answer)
   - ❑ Prescription medicine
   - ❑ Medicine I buy without a doctor's prescription
   - ❑ I don't get asthma attacks

Figure 5-8-d, continued.

Incorporate explanations and definitions into the questions, right where people need them.

Embedding definitions and instructions into the question makes it easier for people to understand what you are asking and give an accurate answer.

The term, "second-hand smoke" may be unfamiliar to some people who fill out this questionnaire. To help them understand what is meant by this term, there is a definition in parentheses immediately after the term.


12. If you would like to know more about any of the following topics, please mark the box:

- ❑ Ways to help *prevent* asthma attacks
- ❑ Safety of taking asthma medicines
- ❑ Second-hand tobacco smoke (breathing the smoke from other people's cigarettes, cigars, and pipes)
- ❑ Getting help to quit smoking
- ❑ Other things you want to talk about during your visit today:

____

____

Source: This example shows a version of a questionnaire that was developed and tested for the Oregon Asthma Resource Bank by the Toolkit writer and her partner, Mark Evers (McGee & Evers Consulting, Inc.), for the State of Oregon. Used as example in this Toolkit with permission from the State of Oregon. For more about the Resource Bank, visit http://www.oregon.gov/DHS/ph/asthma/resourcebank/.

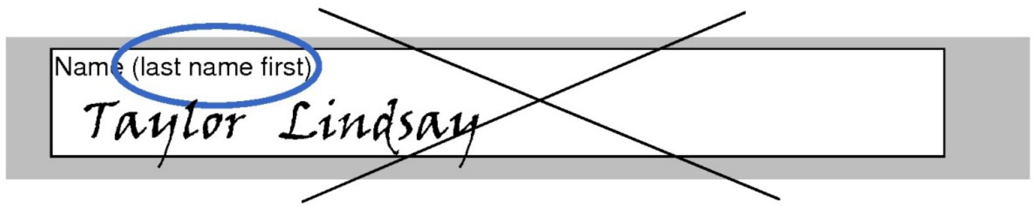
Ask for information in ways that will be intuitive to respondents

A reader-centered approach to forms and questionnaires focuses on making the process of supplying information as easy and intuitive as possible. When you ask for information in the ways that your readers are used to thinking about it, it's easier for them to respond and they are less likely to make errors. Figure 5-8-e illustrates this point by comparing hard and easy ways to ask people for information.

Figure 5-8-e. Comparing hard and easy ways to ask for name and date of birth.

EXAMPLE A - asking for a person’s name (hard way, easy way)

Hard way (slows readers down and may lead to errors)



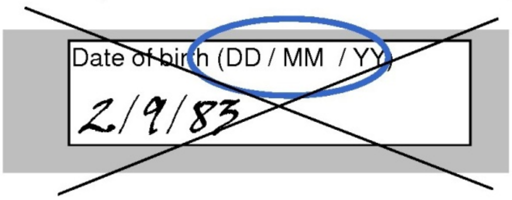
- Slows readers down to have instructions in parentheses for such a simple item.
- Asks for the name in a different order than usual (last name first), forcing readers to stop and think a bit.
- In this example, did the person follow the instruction about putting the last name first? It’s hard to tell. There’s no comma separating the names, and *Taylor* could be either a first or last name. So could *Lindsay.*

Easy way (more intuitive for readers, more accurate information)

- Asks for the full name in its usual order.
- Has self-explanatory labels with designated places to write each part.
- Is quick and easy to complete without stopping to think.

EXAMPLE B –asking for date of birth (hard way, easy way)

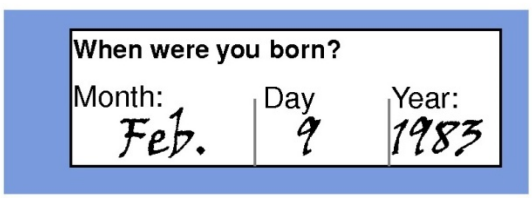
Hard way (slows readers down and may lead to errors)



Has there been an error? If the reader missed the instructions or didn’t understand them, the date that is filled in could be February 9 rather than September 2.

- It slows down readers to have instructions in parentheses for such a simple item – and some readers won’t understand what is meant by “DD / MM / YY.”
- It requests the date in an order that’s less common for most readers (day first), forcing them to stop and think a bit more than usual.

Easy way (more intuitive for readers, more accurate information)



- Self-explanatory labels and designated places to write each part.
- It’s quick and easy for a reader to write the date correctly without stopping to think about it.

Leaving more space for the month lets people write it out if they prefer, rather than using a number. If they do write the name of the month, it’s easy to convert it to a number if the information is entered into a database.

Source: These fictional examples about ways to ask for name and birth date (not the visual formatting and commentary) are adapted with permission from *Creating Plain Language Forms for Seniors: A Guide for the Public, Private, and Not-for-Profit Sectors* (Canadian Public Health Association, National Literacy and Health Program, 1998:19).

As shown by the examples above, when you match the way you ask your questions to your respondents’ logic, they don’t have to stop and think about what you are asking for or how to answer.

Formatting and labeling of fill-in questions

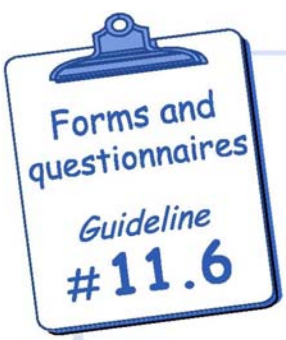
When you are designing fields that will ask respondents to fill in an answer, be sure to label them clearly and leave plenty of space for the answer. Good labeling gives a clear signal about what the question is asking and makes it faster and easier for people to provide accurate answers.

It works best to put the label in the upper left-hand corner of the top of the field, as shown in the examples in Figure 5-8-e above. Putting the label in this position makes it easier for people to respond:

- When you put the label in the top left corner, it fits with the normal pattern of reading (from left to right, starting at the top left corner).

- When you put the label at the top of the field, leaving space below it for the fill-in answer, it leaves the maximum amount of space for writing.

Try to avoid using a grid format to collect information



In a form for people with low literacy skills, avoid using a grid or matrix format to collect information.

A grid or matrix format has rows and columns. When you use a grid to collect information, readers have to keep looking up at the headings at the top of the columns to understand what you are asking for. To make it easier for people to give accurate answers, consider breaking each part of the grid into a fully labeled separate item.

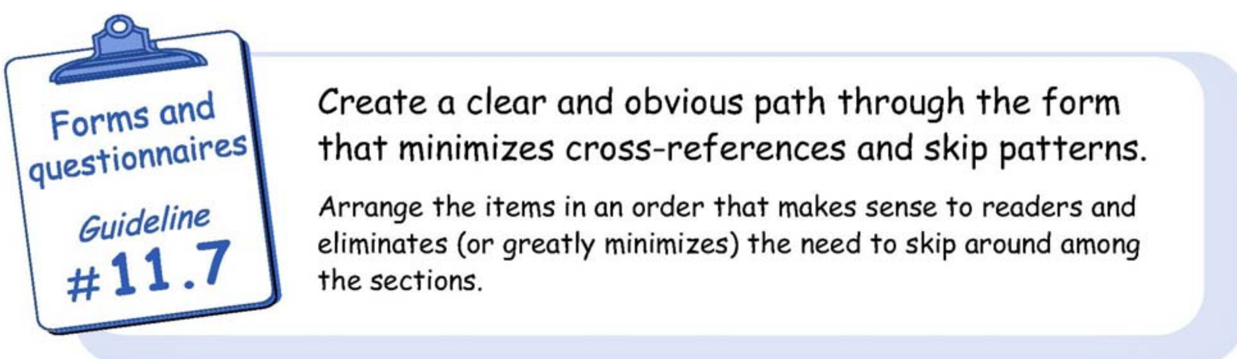
Suppose that you are designing an application form for Medicaid or CHIP and you are working on the section that asks for demographic information about each family member (name, date of birth, etc.). Since it asks for the same demographic information for each person, one option is to use a grid format with rows and columns to collect this information. There would be one row for each family member and each column would have a heading that identifies the type of demographic information to be filled in.

Although this type of grid layout is widely used in forms, it is not a good choice if the form is to be completed by people with low literacy skills. If you are not accustomed to grid formats, it can be hard to know what you are supposed to do. And even when you do understand how the rows and columns work in a grid format, it is burdensome to keep going back and forth across a row and up and down the columns.

Instead of using a grid format, try turning each row of the grid into a separate question with its own labels for each field. If the questions ask for demographic information, there would be a separate one for each family member that has a fill-in field for each piece of demographic information about that family member.

Although it will take up more space than a grid format, **converting a grid format into separate questions reduces the cognitive burden** and makes it much easier for people with low literacy skills to understand the questions and supply accurate answers. This approach of converting a grid format into separate questions was used to simplify the United States Census form for the year 2000. This improvement to the Census Form is described in detail by Don Dillman (2000:102-105). He discusses the cognitive burdens imposed by the rows-and-columns format and shows the "before" and "after" versions of the form. For another example, see Figure 5-7- b in the previous chapter (Toolkit Part 5, Chapter 7, *Guidelines for tables, charts, and diagrams*).

Create a straight and simple path through the form that minimizes cross-references and skip patterns



To guide your readers quickly and easily through a form or questionnaire, create a clear and obvious path for them to follow. This section gives tips about ways to create an effective layout that minimizes distractions.

Create a layout that guides readers through the page

As noted earlier in this chapter under Guideline 11.3, it's important to keep the layout clear and uncrowded. It's also important that the layout be consistent with the way readers typically work their way through a document. In another chapter of this Toolkit, we give tips on how to create effective layouts that fit with readers' natural tendencies and help them notice everything on a page. See the diagrams of "reading gravity" in Figure 5-2-c and the discussion of Guideline 5.3. Both are in Toolkit Part 5, Chapter 2, *Guidelines for overall design and page layout*.

For an example of a layout that helps guide readers through the page, see the questionnaire that appears earlier in this chapter in Figure 5-8-d. The prominent question numbers, two-column layout, and ample white space all help create a clear and obvious path for readers to follow.

Minimize detours and distractions

In a form or questionnaire, cross-references and skip instructions can be distracting and confusing to respondents, especially if the respondents have low literacy skills (MAXIMUS, 2005). Make the task of completing the form or questionnaire easier by avoiding cross-references and skip instructions as much as you can:

- Cross-references to other sections of a form or questionnaire interrupt a respondent's smooth progression through the document. Try to arrange the items so that cross-references are not necessary. Incorporating instructions and explanations into the questions helps avoid the need to send respondents to another section of the document.

- When questions might not apply to certain respondents, the instructions sometimes tell people to skip over the questions that don't apply (such as saying "skip ahead to question 15"). Skip instructions of this type are often called skip patterns. When you put skip patterns into a questionnaire, you increase its complexity and the likelihood that people will make mistakes when they fill it out. For any questionnaire, it's wise to avoid skip patterns as much as you can. If your respondents will include people with low literacy skills, it's especially important to eliminate as many skip patterns as you can. Here are some tips:

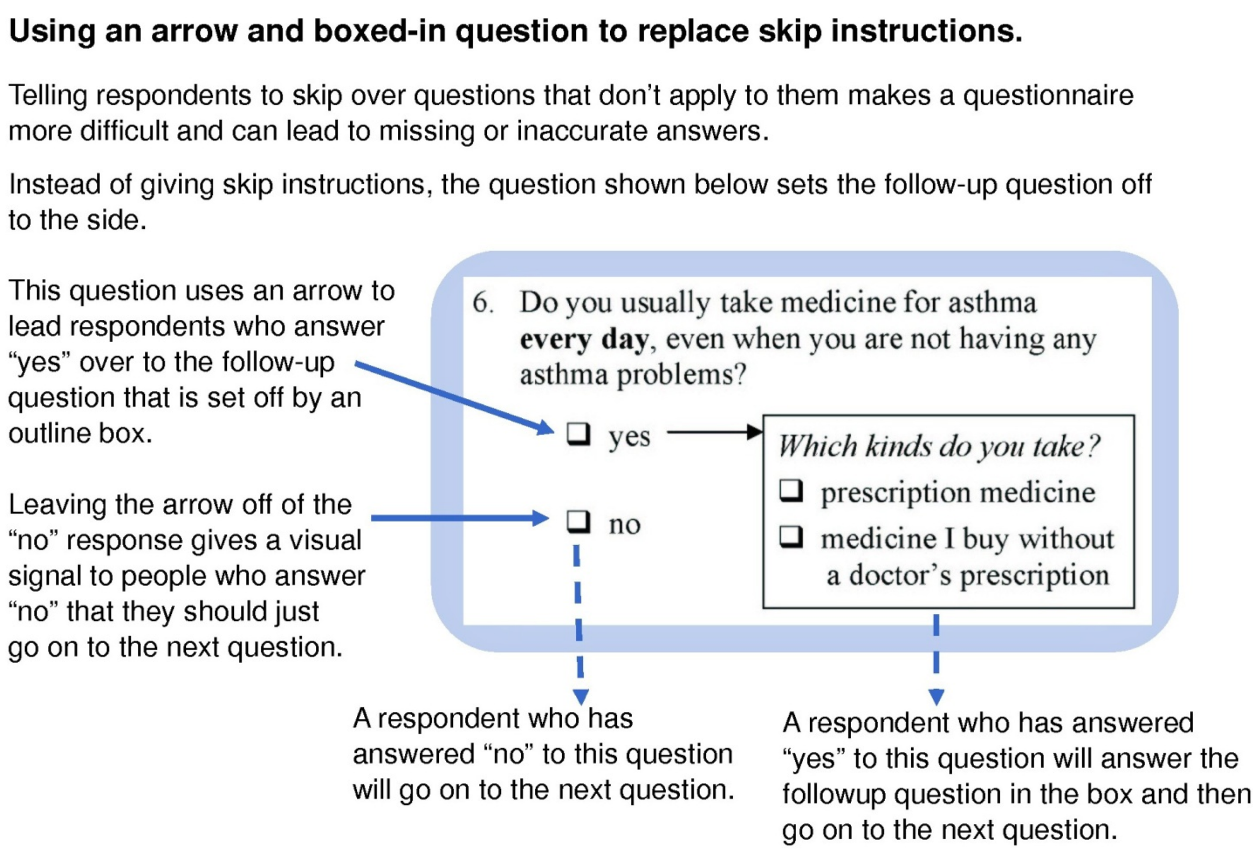
    - **Try expanding the answer choices to include a way for people to tell you when a question doesn't apply to them.** There's an example in Figure 5-8-d earlier in this chapter. Question 7 asks "When you get an asthma attack, what kind of asthma medicine do you usually take?" The answer choices include "I don't get asthma attacks." Including this choice gives respondents an easy way to say that the question does not apply to them, so a skip instruction is not needed. (That is, you don't have to say, "If you don't get asthma attacks, skip ahead to question 8.")

- **If there is just a single follow-up question, try formatting it off to the side**. Figure 5-8-f below shows an example that uses formatting to avoid the need for a skip pattern.

- **If you must include skip patterns in a form or questionnaire, label them clearly and check on how well they are working.** Test the questionnaire with respondents to be sure that they notice and understand the skip instructions, and are able to follow them without difficulty.

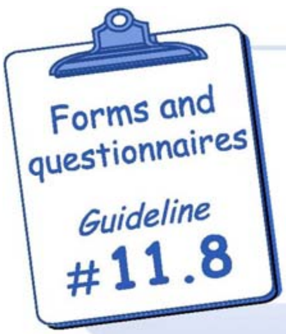
Figure 5-8-f. Formatting a follow-up question to avoid the need for skip instructions.

This example is a close-up of Question 6 from the asthma patient questionnaire that was shown earlier in this chapter in Figure 5-8-e.



Source: This example shows an excerpt from a version of a questionnaire that was developed and tested for the Oregon Asthma Resource Bank by the Toolkit writer and her partner, Mark Evers (McGee & Evers Consulting, Inc.), for the State of Oregon. Used as an example in this Toolkit with permission from the State of Oregon. For more about the Resource Bank, visit http://www.oregon.gov/DHS/ph/asthma/resourcebank/.

Do usability testing to get reactions from readers



Conduct usability testing.

To find out whether a form or questionnaire is working well, conduct usability testing with intended users. Have them fill it out, and then talk with them to get their reactions and suggestions.

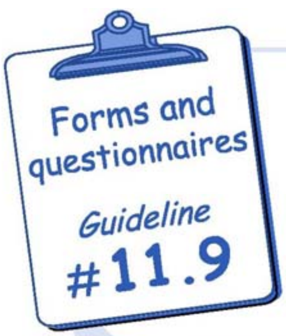
When you are developing forms and questionnaires, keep reminding yourself that these formats can be quite challenging for many people to understand and use, especially for people with low literacy skills. Completing a form or questionnaire can require writing as well as reading skills, and many people have had very limited exposure to these formats.

The best way to find out how well respondents can understand and use a form or questionnaire is to do usability testing. Usability interviews are very informative because they focus on whether, and how well, people are able to put the document to its intended use. You give the form or questionnaire to a respondent and have them fill it out. You can watch as they do this, and encourage them to share any comments they have while they are working on completing it. When they have finished, you can talk with them about their reactions to the form or questionnaire. For example, you can get insights into comprehension by asking them to share what they thought each question was asking and how they decided which answer to mark.

If you have never done usability testing, you may be amazed at how much you can learn and how helpful the results can be. You don't need to spend a lot of time and money on usability testing; you can get useful feedback from a small number of interviews. To get the greatest benefit from usability testing, it's helpful to start doing usability testing as soon as you have a draft of the form or questionnaire. Starting early helps you catch and fix any big problems while there is still plenty of time available. It's wise to split your testing into two rounds so that you can use the second round to check on how well your revisions are working.

For details on how to do usability testing, see Toolkit Part 6, *How to collect and use feedback from readers.*

Take into account how forms and questionnaires will be processed



When you are designing a form or questionnaire, take into account how it will be produced, distributed, and processed.

Work with others to produce a form that is both easy to fill out and easy to process.

So far, the guidelines in this chapter have focused on ways to make forms and questionnaires easier for people to understand and use. Ideally, the things you need to do to make forms and questionnaires work well for respondents will be compatible with the requirements and constraints related to producing, distributing, and processing the forms. But sometimes the needs of respondents may be at odds with some practical constraints. For example, the need to maintain consistency with existing forms or meet data entry requirements may limit your ability to make certain kinds of improvements in a form (see discussion in *Creating Plain Language Forms for Seniors* (Canadian Public Health Association, 1998).

As you work on developing a form or questionnaire, try to anticipate possible problems at an early stage. Work with staff in other departments to find solutions that meet their needs as well as those of the respondents.

End notes

Acknowledgments

Thanks to Penny Lane and Mark Evers for their substantial contributions to this chapter. Some guidelines in this chapter are based in part on work by Christina Zarcadoolas, Penny Lane, Holly Smith Mirenda, and Mercedes Blanco on a project done for the Centers for Medicare & Medicaid Services by the MAXIMUS Center for Health Literacy in Reston, Virginia (visit http://www.maximus.com/services/health/health-literacy).

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CAHPS (Consumer Assessments of Healthcare Providers and Systems)

The CAHPS program is a public-private initiative to develop standardized surveys of patients' experiences with health care. CAHPS results are used by health care organizations, public and private purchasers, consumers, and researchers. For more information, see http://www.cahps.ahrq.gov/ (accessed September 8, 2006).

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MAXIMUS

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