



Model Systems  
Knowledge Translation  
Center

Translating Research into Rehab and Better Living

## Writing and Testing Plain Language

<b>Purpose</b>	This knowledge translation tool presents the principles of plain language writing and how to test the grade level at which text is written. Consumers have a better chance of understanding health and scientific content if it's written in plain language.
<b>Format</b>	This tool is written using the principles of plain language writing. Topics are organized under brief and clear headings. Content of paragraphs and sentences is concise. Examples offer before and after versions of plain language writing. Lists are used to highlight main points.
<b>Audience</b>	Writers and content developers should use this tool to help them write more clearly. The tool is designed to better convey health-related content to consumers of materials from the Model Systems Knowledge Translation Center (MSKTC) ( <a href="https://msktc.org/">https://msktc.org/</a> ).
<b>Resources</b>	Resources are listed in the bibliography at the end of this tool.
<b>Learn more</b>	To learn more about the knowledge translation tools developed by MSTKC, visit <a href="https://msktc.org/knowledge-translation">https://msktc.org/knowledge-translation</a> .

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*Note:* All web links in this tool were active as of May 23, 2023.

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### **PLAIN LANGUAGE: IT'S THE LAW**

The Plain Writing Act of 2010 makes writing in plain language the law. It requires government agencies to write clearly so that U.S. citizens can understand and use information and services from the government.

### **WHAT IS PLAIN LANGUAGE?**

Plain language delivers your message and content clearly to the target audience. The goal is for readers to understand the content the first time they read it.

Plain language does not “dumb down” content or delete complex information. Instead, plain language gives readers a better chance of understanding the information that is presented. Documents written in plain language are also easy for readers to scan, that way they can quickly find the information they want.

Plain language documents are

- Clear and concise,
- Easy to follow, and
- Conversational and direct.

Content is written in plain language if readers

- Find what they need,
- Understand what they find, and
- Use what they find to meet their needs.

### **PRINCIPLES OF PLAIN LANGUAGE WRITING**

#### **Identify and Write to Your Audience**

Language that is plain to one audience may not be plain to another. The first step in plain language writing is to identify your audience. Here are some examples of audiences of health-related topics:

- Health consumers,
- Health insurers (staff at health insurance companies, plan administrators, customer service staff),
- Patients and their family members,
- First responders,
- Doctors,
- Nurses,
- Staff at doctor’s offices and hospitals,
- Students,
- Researchers,
- Scientists,
- Trainers, and
- Policymakers.

Next, write to your audience. Keep answers to these questions in mind as you write and rewrite:

- What is the age and education level of my readers?
- How familiar are my readers with this health topic and the terms used to discuss it?
- What do my readers need to know?
- What action should my readers take after reading this document?

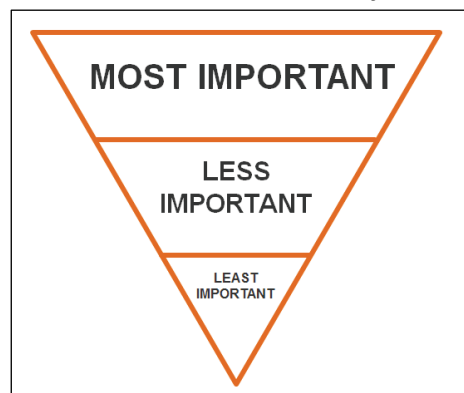
**Organize Your Document**

A well-organized document increases the chance that readers will understand the content. At the macro level, develop a full outline that maps out a logical plan for the content. The main topics in the outline can be used as the main headings in your document. Also, state the document’s purpose and its bottom line early in the document—that way readers know what to expect from it. A reader’s time is important. You don’t want to waste it.

At the micro level, follow a concept known as the “inverted pyramid” to prioritize and organize content:

- Focus each paragraph on one topic;
- Start each paragraph with a topic sentence;
- Make sure that the sentences in the paragraph flow from and speak to the topic sentence; and
- Put the most important concepts first, followed by content that’s less important and then least important.

**Exhibit 1. Visual of Inverted Pyramid**



**Write Your Content**

**Paragraphs**

- Write short paragraphs (generally fewer than 150 words but no more than 250 words). Compared with long paragraphs, short paragraphs are easier to understand and are more inviting to readers.
- Craft a topic sentence that establishes the main idea of the paragraph. A topic sentence lets readers decide whether they want to continue.
- Limit the paragraph to just one topic.
- Use transitions.

**Exhibit 2. Paragraphs: Before and After Examples**

Before	After
<p>Medical complications, infectious and noninfectious, are well documented in patients with severe traumatic brain injury (TBI) and traumatic disorders of consciousness (DOCs). Despite this, very little research has been done on the progression of medical complications in this group. This study aims to determine the occurrence and characteristics of new complications (both medical and surgical) in the severe TBI and DOC population. Furthermore, to better assess the needs of these patients, the study will also investigate any trends in the occurrence of medical complications during a 6- week post-injury timeframe.</p>	<p>We know a lot about medical complications in patients with severe traumatic brain injury and traumatic disorders of consciousness. But we know very little about how these problems evolve over time. For this study, researchers were interested in the type and severity of new issues in these patients. The study also focused on trends during a 6-week timeframe after the injury.</p>

Before	After
<p>Timing is everything. It is important to truly understand your needs before venturing into the purchase of equipment. There can be many pressures to make a decision for a vehicle before all of the facts are in. It is always best to err on the side of caution. Too often, fundraisers are done and a vehicle is purchased without proper consideration and ultimately the vehicle does not match its intended owner. Even worse, the vehicle may not be able to be adapted for your needs. In a case where a purchased vehicle cannot be adapted, funds are wasted in the sale of the vehicle and subsequent purchase of a prescribed or well matched vehicle. Rushing into a vehicle purchase will almost always make an appropriate vehicle more expensive than if a proper evaluation is made at the appropriate time. An evaluation can be made for newly injured patients to make recommendations for safe transportation. These recommendations can give you vehicle options and equipment that can transition with you for potential driving at a later date. A haphazard approach may limit future vehicle adjustment for your needs. An evaluation is recommended specifically for driving once the individual is ready.</p>	<p>You want to make sure that you buy the right product for your needs. You don't want to buy a piece of equipment or a vehicle and then find out that it doesn't meet your needs. You'll waste a lot of time and money if you make a quick purchase. Before you buy:</p> <ul style="list-style-type: none"> <li>• Understand your needs</li> <li>• Get evaluated by your doctor and specialist</li> <li>• Get the facts about all of your choices</li> </ul> <p>Only then are you ready to buy.</p> <p>Your doctor will help you understand the extent of your injury and your needs going forward. A specialist will assess your need for special driving equipment and suggest the right options to meet those needs.</p>

*Note:* The “After” examples presented in this exhibit also include other principles of plain language writing that are explained later in this document.

**Sentences**

- Write short sentences (generally 15 words on average but no longer 30 words).
- Use a simple sentence structure: subject-verb-object.
- Keep the subject close to its verb.
- If an introductory clause is a must, keep it short. Too many phrases early in the sentence force readers to remember too much before they reach the main idea.
- Put long phrases after the main point or clause, but include them only if they hold meaning.
- Provide examples. Good examples can be used in place of long explanations. Examples help readers relate to the content.
- Minimize the use of cross-references. A well-organized document shouldn't have to refer readers to other sections of text.

**Exhibit 3. Sentences: Before and After Examples**

Before	After
<p>Patients aged 16 years and older receiving inpatient rehabilitation for a primary diagnosis of TBI between 2001 and 2010 were included in this study.</p>	<p>The study group included patients 16 years of age and older. These patients received inpatient rehab for a primary diagnosis of TBI between 2001 and 2010.</p>
<p>All were assessed with the Functional Independence Measure (FIM) at rehabilitation discharge, and at 1, 2, and 5 years after injury.</p>	<p>Patients completed the Functional Independence Measure (FIM) four times: at discharge and 1, 2, and 5 years after the injury. Researchers use the FIM to track changes in functional ability.</p>

Before	After
However, by-age distributions showed a gradual increase in females with age, to almost an even distribution for those aged 80 years and older.	Rates of TBI among females increased gradually with age. By 80 years of age, TBI occurred nearly equally in males and females.
HelpHOPELive. Experts in community-based fundraising, this organization helps people faced with a catastrophic injury tackle the daunting task of bridging the financial gap between what their health insurance will cover and what they actually need to heal, live and thrive.	HelpHOPELive offers ways to start and maintain fundraising campaigns. You can use money from these campaigns to pay for health-related costs that insurance doesn't cover.

**Verbs**

- Write in the active voice. Voice is the form a verb takes to tell whether its subject acts or is acted upon. When the subject does the verb (acts), the sentence is in the active voice. When the subject receives the verb (is acted upon), the sentence is in the passive voice.
- Use passive voice in only two instances:
  - When you do not know who is performing the action and
  - When the object of the action is more important than the subject of the action.
- Use the simplest and strongest form of the verb—present tense. Present tense is more direct and forceful. Feel free to use other tenses, but don't confuse the reader.
- Do not hide verbs. A hidden verb is a verb converted into a noun.
- State clearly what the reader should do. Do not use "shall." Instead, use
  - "Must" for an obligation,
  - "Must not" for a prohibition,
  - "May" for a discretionary action, and
  - "Should" for a recommendation.
- Use contractions. Readers are used to hearing contractions in spoken English. When they sound natural, use contractions in your writing—but don't overuse them.

**Exhibit 4. Verbs: Before and After Examples**

Before	After
This information was given by doctors to patients.	Doctors gave this information to patients.
This fact sheet provides a summary of the importance of exercise or movement after a burn injury.	This fact sheet summarizes the importance of exercise or movement after a burn injury.
It is important to truly understand your needs before venturing into the purchase of equipment.	You must understand your needs before you buy any equipment.
The decision on data release will be based on a vote of the majority by Project Directors.	Project Directors will vote on when to release the data.
Estimates of rehabilitation length of stay for the total population were most often 10 to 19 days (40.5%).	Forty percent of the study group stayed, on average, 10–19 days in a rehab unit.

**Nouns and Pronouns**

- Get rid of noun strings. In a noun string, several nouns occur one after the other. Noun strings are tough to understand.
- Use pronouns. Pronouns help readers picture themselves in the text and relate to the content:
  - Use “you” to address readers and
  - Use “we” to refer to your agency or group.
- Use acronyms and abbreviations sparingly:
  - Define acronyms at first use,
  - Use only the most important acronyms,
  - Don’t make up acronyms, and
  - Don’t use acronyms as a way to shorten sentences.

**Exhibit 5. Nouns and Pronouns: Before and After Examples**

Before	After
This study examines whether online emotional regulation group treatment training in those with TBI makes sense.	This study examines the feasibility of delivering online training about emotional regulation to people with TBI.
If you do not know how to reach your state brain injury association, contact the Brain Injury Association of America to find out: 1-800-444-6443.	If you do not know how to reach the brain injury association in your state, give us a call: 1-800-444-6443.
This guide is intended to support model systems (MS) grantees in their efforts to engage stakeholders through communities of practice.	This guide supports grantees of model systems in their efforts to engage stakeholders through communities of practice.

**Word Choice**

- Avoid empty chatter and fluff. Instead, get straight to the point.
- Use normal, everyday words that readers know.
- Use short words with only a few syllables.
- Use one word instead of many to express an idea.
- Get rid of words that when removed, don’t change the meaning of the content, such as
  - Wordy prepositional phrases and
  - Excess modifiers, like absolutely, actually, completely, really, quite, totally, and very.
- For complex terms, such as medical diagnoses or procedures, names of diseases, and health conditions,
  - Define the terms but keep definitions to a minimum and
  - Consider inserting phonetic spellings for complex words. Phonetic spellings for medical terms can be found in the [Merriam-Webster Medical Dictionary](#).
- Avoid jargon. Jargon is a special language used by a particular group, such as doctors. If you have to use jargon, then define it.
- Don’t use different terms for the same concept (for example, don’t use “adolescent” in one place and “youth” in another).

**Exhibit 6. Examples of Simpler Word Choices**

Instead of . . . .	Use . . . .
Adapt	Change
A number of	Several, few, many
As a consequence of	Because
A sufficient number of	Enough
Assist, benefit	Help
As well as	And
By means of	By
Comprehensive	Thorough
Despite the fact that	Although, though
Due to the fact of	Because
Establish	Set up, prove, show
For the purpose of	To, for
However	But
In accordance with	Follows
In order that	For, so
In order to	To
Is able to	Can
Modify	Change
Objective	Aim, goal
On a monthly basis	Monthly
On the grounds that	Because
On the occasion that	When
Primary	Main
Purchase	Buy
Referred to as	Called
Successfully complete	Complete, pass
The question as to whether	Whether
To the extent that	If, when
Utilize, utilization	Use
Whether or not	Whether
With regard to	About, for

Note: Plainlanguage.gov offers more [examples of simple words and phrases](#).



### ***Text and Other Approaches as Visual Aids***

- Use short, clear, and informative headings. These types of headings make the document easy to follow. They also break up the content into small, logical, and understandable chunks.
- Use vertical lists to highlight information in a clear way. Lists can be used to
  - Show levels of importance;
  - Help readers understand the order in which things happen;
  - Point out all necessary steps in a process; and
  - Present items, conditions, and exceptions.
- Use tables and graphics to display big batches of data and to help readers see relationships that are often hidden in dense text.
- Consider using bold and italics to emphasize important content, but do so only sparingly.
- Never use underlines because they can be mistaken for hyperlinks in online documents.
- Don't use all capital letters in main body text (except for acronyms). Use ragged right page margins when possible, not page margins set to full justification.

## **TESTING THE LANGUAGE IN YOUR DOCUMENT**

### **Testing Methods**

The goal of writing in plain language is for readers to understand the content the first time they read it. Testing the plain language in your document is a good way to tell whether you've hit that mark. The best way to test documents is to conduct interviews or focus groups with people in your target audience. These methods give you feedback directly from readers. But using these methods is not always possible because of schedules, budgets, or logistical issues.

If you can't test your document with readers, another option is to perform a readability test, such as

- Flesch-Kincaid Readability Test or
- Fry Readability Test.

Readability tests use math formulas to give objective scores on writing. These tests can tell you the grade level at which your document is written. According to Walsh and Volsko (2008), consumers may not understand health-related content if it is written at a level higher than 7th grade. If you know the grade level of your target audience, then you can use these tests to guide your language to that grade level as you write and rewrite.

### **Word of Caution**

Readability tests do a good job at measuring how well you write to the principles of plain language. But they can't tell you if your readers will understand and use your document.

Results of readability tests, including Flesch-Kincaid and Fry, focus mainly on three parts of writing: number of sentences, words, and syllables. These parts are very important principles of plain language writing. The better you are at writing this way, the better your readability (or grade level) score will be.

But these tests can't account for other good writing principles—such as, the use of topic sentences, how sentences flow from one to the next, and overall organization. And they certainly can't measure how well readers understand the content or account for the knowledge and skills that readers bring to the table. So, even if you achieve a good score on grade level, some readers still may not be able to understand and use the document.

Again, the best way to test your document is to get feedback directly from your readers through interviews or focus groups. If that’s not an option, then you can always use readability tests to measure how effective you are at writing to the principles of plain language. If you write on or below the grade level of your readers, then they should be familiar with most of the language in the document. The more familiar your readers are with the language, the better chance they will have at understanding the content. By sticking to the principles of plain language writing, you give your readers a better chance of understanding and using your document.

### **Flesch-Kincaid Readability Test**

If you use Microsoft Word, you can run the full spelling and grammar check to get results on the Flesch-Kincaid Readability Test.

Writing to the principles of plain language affects two scores on the Flesch-Kincaid Readability Test:

- Grade level and
- Reading ease.

#### ***Grade Level***

This test rates text on a U.S. school grade level.

The formula for the Flesch-Kincaid grade level score is:

$$(.39 \times \text{ASL}) + (11.8 \times \text{ASW}) - 15.59$$

ASL means average sentence length (the number of words divided by the number of sentences). ASW means average number of syllables per word (the number of syllables divided by the number of words).

#### ***Reading Ease***

This test rates text on a 100-point scale. The higher the score, the simpler the text. The reading ease scale can be interpreted as follows:

- 90–100: Very Easy
- 80–89: Easy
- 70–79: Fairly Easy
- 60–69: *Standard*
- 50–59: Fairly Difficult
- 30–49: Difficult
- 0–29: Very Confusing

For health content, you should strive for a reading ease score of 60 or higher. Results of the reading ease test don’t necessarily translate to grade level. But as reading ease gets higher, the grade level gets lower.

The formula for the Flesch-Kincaid reading ease score is:

$$206.835 - (1.015 \times \text{ASL}) - (84.6 \times \text{ASW})$$

ASL means average sentence length (the number of words divided by the number of sentences). ASW means average number of syllables per word (the number of syllables divided by the number of words).

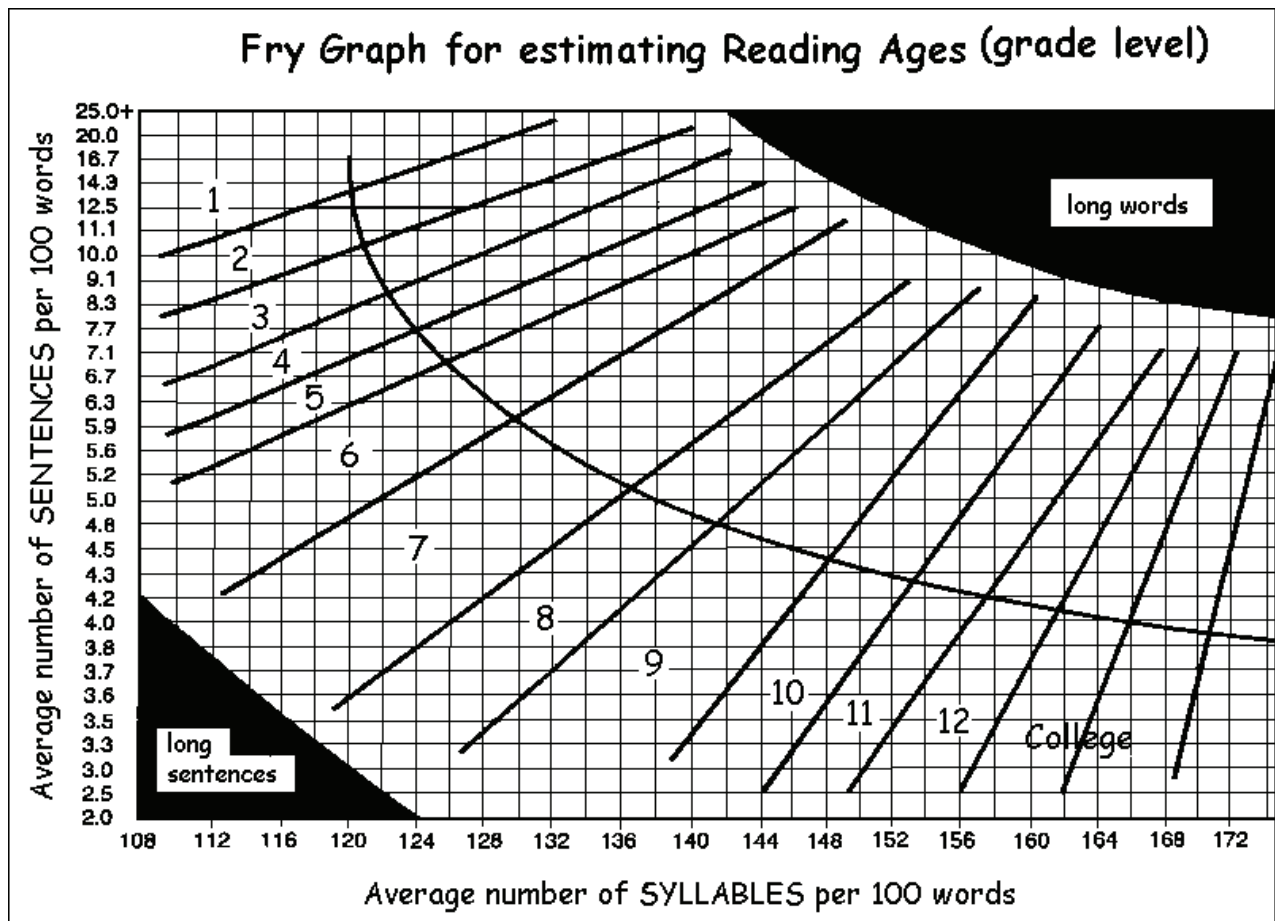
**Fry Readability Test**

For the Fry Readability Test, you find the average number of syllables and sentences in three batches of text and then plot those averages on a graph to determine the grade level.

1. Randomly choose three chunks of text that are each 100 words.
2. Count the number of sentences in each chunk, add them together, and then divide that number by three to get the average.
3. Count the number of syllables in each chunk (ignoring numerals and proper nouns), add them together, and then divide that number by three to get the average.
4. Plot each average number on the graph. The point at which the numbers intersect identifies the grade level.

If the counts that you get (in steps 2 and 3) differ a lot, include more 100-word chunks of text in your test.

**Exhibit 7. Fry Readability Graph**



Source: Fry (1977).

### BIBLIOGRAPHY

#### Resources Consulted for This Tool

Centers for Disease Control and Prevention. (2009). *Simply put: A guide for creating easy-to-understand materials* (3rd ed.). [http://www.cdc.gov/healthliteracy/pdf/simply\\_put.pdf](http://www.cdc.gov/healthliteracy/pdf/simply_put.pdf)

Centers for Medicare and Medicaid Services. (2012, March 16). Section 4: Special topics for writing and design. Part 7. Using readability formulas: A cautionary note. In: *Toolkit for making written material clear and effective*. <https://wayback.archive-it.org/2744/20191012053850/https://www.cms.gov/Outreach-and-Education/Outreach/WrittenMaterialsToolkit/Downloads/ToolkitPart07.pdf>

Fry, E. (1977). *Elementary reading instruction*. McGraw-Hill.

Microsoft. (n.d.). *About Flesch Kincaid readability and level statistics*. <https://support.microsoft.com/en-us/office/about-flesch-kincaid-readability-and-level-statistics-8fbb787e-4e1d-4dcc-933f-c7d2f06e76ac>

Microsoft. (n.d.). *Get your document's readability and level statistics*. <https://support.microsoft.com/en-us/office/get-your-document-s-readability-and-level-statistics-85b4969e-e80a-4777-8dd3-f7fc3c8b3fd2>

Plain Language Association International. (n.d.). *About plain language*. [http://www.plainlanguagenetwork.org/About\\_Plain\\_Language/aboutplainlanguage.html](http://www.plainlanguagenetwork.org/About_Plain_Language/aboutplainlanguage.html)

Plainlanguage.gov. (n.d.). *What is plain language?* <http://www.plainlanguage.gov/about/definitions>

Plainlanguage.gov. (2011, May, Revision 1). *Federal plain language guidelines*. <https://www.plainlanguage.gov/media/FederalPLGuidelines.pdf>

Walsh, T. M., & Volsko, T. A. (2008). Readability assessment of internet-based consumer health information. *Respiratory Care*, 53(10), 1310–1315. <http://www.ncbi.nlm.nih.gov/pubmed/18811992>

#### Other Helpful Resources About Plain Language and Health Literacy

Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., Viera, A., Crotty, K., Holland, A., Brasure, M., Lohr, K. N., Harden, E., Tant, E., Wallace, I., & Viswanathan, M. (2011, March). *Health literacy interventions and outcomes: An updated systematic review*. (AHRQ Publication Number 11-E006). National Institutes of Health, National Library of Medicine, National Center for Biotechnology Information. <http://www.ncbi.nlm.nih.gov/books/NBK82434/>

CDC Train (n.d.). *Fundamentals of communicating health risks*. <https://www.train.org/cdctrain/course/1066960/details>

CDC Train (n.d.). *Health literacy for public health professionals (web based)—WB4499*. <https://www.train.org/cdctrain/course/1105934/details>

Centers for Disease Control and Prevention (2022, August 22). *Plain language materials & resources*. <https://www.cdc.gov/healthliteracy/developmaterials/plainlanguage.html>

Centers for Disease Control and Prevention. (2023, April 6). *Health literacy*.  
<http://www.cdc.gov/healthliteracy/>

Centers for Disease Control and Prevention. (2023, April 18). *Health literacy: find training*.  
<http://www.cdc.gov/healthliteracy/GetTraining.html>

Centers for Disease Control and Prevention. (2023, April 18). *The CDC clear communication index*.  
<https://www.cdc.gov/ccindex/index.html>

Centers for Medicare & Medicaid Services. (January 2023, updated). *Writing for the web: Tips to help you improve online communications*. <https://www.cms.gov/files/document/writing-web.pdf>

Health Literacy Solutions Center. (n.d.). *Resource library*. <https://www.healthliteracysolutions.org/library>

National Center for Health Marketing. (2009). *Plain language thesaurus for health communications*.  
Oak Ridge Institute for Science and Education.  
<https://www.orau.gov/hsc/HealthCommWorks/MessageMappingGuide/resources/CDC%20Plain%20Language%20Thesaurus%20for%20Health%20Communication.pdf>

National Institutes of Health. (2022, August 31). *Plain language training*. <https://www.nih.gov/institutes-nih/nih-office-director/office-communications-public-liaison/clear-communication/plain-language/training>

Office of Disease Prevention and Health Promotion. (2006, September 7). *Proceedings of the Surgeon General's workshop on improving health literacy*. National Institutes of Health, National Library of Medicine, National Center for Biotechnology Information.  
<http://www.ncbi.nlm.nih.gov/books/NBK44257/pdf/TOC.pdf>

Office of Disease Prevention and Health Promotion. (2016, June 8). *Health literacy online: A guide to simplifying the user experience*. <https://health.gov/healthliteracyonline/>

Platter, H., Kaplow, K., & Bauer, C. (2019, August 21). Community health literacy assessment: A systematic framework to assess activities, gaps, assets, and opportunities for health literacy improvement. *Health Literacy Research and Practice*, 3(4), e216–e226. <https://doi.org/10.3928/24748307-20190821-01>

Platter, H., Kaplow, K., & Baur, C. (2022). The value of community health literacy assessments: Health literacy in Maryland. *Public Health Reports (Washington, D.C.: 1974)*, 137(3), 471–478.  
<https://doi.org/10.1177/003335492111002767>

Public Health Communications Collaborative. (2023, February 9). *Plain language for public health*.  
<https://publichealthcollaborative.org/resources/plain-language-for-public-health/>

Ridpath, J. R., Greene, S. M., & Wiese, C.J. (2007). *PRISM readability toolkit* (3rd ed.). National Heart, Lung, and Blood Institute. [https://www.nhlbi.nih.gov/files/docs/ghchs\\_readability\\_toolkit.pdf](https://www.nhlbi.nih.gov/files/docs/ghchs_readability_toolkit.pdf)

Rudd, R., Kaphingst, K., Colton, T., Gregoire, J., & Hyde, J. (2004). Rewriting public health information in plain language. *Journal of Health Communication*, 9(3), 195–206.  
<https://doi.org/10.1080/10810730490447039>