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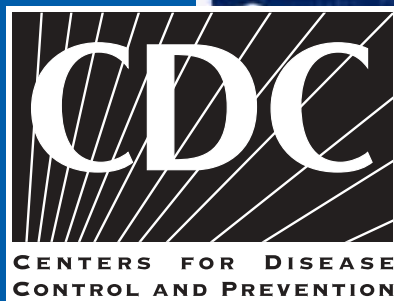
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CDC Style Guide

August 2003



ART OF COMMUNICATION

TYPOGRAPHY

DEPARTMENT OF HEALTH & HUMAN SERVICES • USA





CDC Style Guide

August 2003

Centers for Disease Control and Prevention
1600 Clifton Road, N.E.
Atlanta, Georgia 30333

Send your comments to Pascale Krumm, *CDC Style Guide* editor.

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Introduction

The written word is one of the most effective ways to express thoughts and ideas, provide and share information, and educate and inform audiences. A clear and compelling message is based on simple, understandable words, correct sentence construction, and elegant style.

The *CDC Style Guide*

The *CDC Style Guide* will help everyone who writes documents ranging from letters to press releases to journal articles. The style guide includes writing guidelines and tips and is designed to save editors and writers time by answering frequently asked questions about grammar, style, punctuation, preferred word usage, and reference styles. In addition, the style guide provides guidelines for producing posters and electronic presentations and for writing for the Web. Finally, the style guide addresses clearance and correspondence procedures, presents reference citation styles, and includes useful appendices.

All CDC materials need to be clear and accurate. In addition, these documents should have a uniform look and feel and should reflect and support the CDC identity. Writers tend to develop a personal writing style, usually a mix of commonly accepted grammar rules and preferred stylistic conventions. The *CDC Style Guide* is meant to be a reference tool, so that everyone at CDC can have a common place to learn about grammatical questions, and make sure that our stylistic choices meet accepted rules. The grammar points in this style guide have been pulled from commonly accepted grammar references such as the *AMA Manual of Style*, the *Chicago Manual of Style*, and *Elements of Style* by Strunk and White.

The *CDC Style Guide* and its companion, the *CDC Identity Guide*, will help you communicate with greater efficiency and clarity. These guides will help ensure that your message is accurate and understandable and that it reflects the agency's look and mission. For help with incorporating the CDC identity themes into your documents, consult the *CDC Identity Guide*, or the *CDC Identity Management System* available at <http://intra-apps.cdc.gov/cdcidentity/Login/Home/login.asp>.

“Of all the arts in
which the wise excel,
Nature’s chief master-
piece is writing well.”

John Sheffield

The Elements of Good Writing

The following are points to consider when writing your documents.

Be Concise

William Strunk, Jr. captured the essence of good writing when he said, “Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.”

Be Clear

Good writing is also clear writing; it should include simple words whenever possible. Perhaps the one mistake that writers make most often is using complicated words instead of plain ones. If you want your message to be easily understood, choose simple words. For further guidance on plain writing, consult CDC’s *Scientific and Technical Information Simply Put* at www.cdc.gov/od/oc/simpput.pdf or the Plain English Network’s (PEN) Web site at www.plainlanguage.gov.

Consider the examples of famous scientists who were concise and used simple language to convey sophisticated concepts, proving also that simple does not mean simplistic. Watson and Crick described the double helix (the molecular structure of nucleic acids) in 900 words, one table, and six references. Arthur Kornberg wrote about the enzymatic synthesis of DNA in 430 words. Fritz A. Lipmann described coenzyme A in 250 words, one table, and five references.*

Be Precise

Good writing is also precise. The accurate and precise use of words is crucial in the medical and scientific fields. Your words can leave no room for error or misinterpretation. Many words in the English language are similar in meaning or sound. Be sure to know the differences between these words so you use the right word every time.

Be Correct

Finally, good writing is error-free and grammatically and stylistically correct. Incorrect grammar, confusing punctuation, erratic spelling, and awkward sentence construction

* Adapted from Martin M. Cummings, M.D., former director of the National Library of Medicine, in his 1973 honor lecture to the American Medical Writers Association.

will impede your message, slow the reading process, and make your writing look careless and unprofessional. A well-written document ensures that your message gets through.

Tip: For Your Writing
As you write, ask yourself the following questions:

- What is my key message?
- Am I accurately conveying my message?
- Will the readers immediately understand my message?
- Can I summarize my point in a few short and precise sentences?
- Can I express myself more clearly?
- Did I use the right words?

Tip: Writer's Checklist

These tips are adapted from the *Elements of Style* by Strunk and White and are further developed in this style guide.

- Write for your audience (identify your audience and its interests, education level, and other specifics).
- Use simple words (*we used*, NOT *we utilized*).
- Omit unnecessary words (*near*, NOT *in the vicinity of*).
- Avoid expletives (*there is*, *there are*).
- Avoid redundancies (*blue*, NOT *the color blue*).
- Avoid gender-specific words (*firefighter*, NOT *fireman*).
- Avoid jargon, archaic words, and buzz words (*aspect*, *idea*, *absolutely*, *really*).
- Avoid nominalization. Use verbs, not nouns (*the plan describes*, NOT *contains a description of*).
- Use strong action verbs (*consider*, NOT *give consideration to*; *concerns*, NOT *is concerned with*).
- Be brief and concise. Use short sentences and paragraphs. A readable sentence is short, simple, affirmative, and declarative.
- Use active rather than passive voice whenever possible (*I will know*, NOT *it will be known*).
- Avoid using too many capitals.
- Avoid negatives (*unsafe* instead of *not safe*).
- Avoid split infinitives whenever possible (*to go boldly*, NOT *to boldly go*).
- Be consistent in word use (if you call it a widget the first time, call it a widget throughout).
- Use parallel construction (in sentences, in lists).
- Use bullets for lists.
- Use tables, graphs, and charts, if appropriate.
- Use good design and layout, with plenty of white space (too many words on a page discourage readers before they begin reading).
- Use informative, meaningful titles, headings, and subheadings.

1 Common Grammar and Style Difficulties

Writing clearly, concisely, and professionally requires the use of correct grammar. Nothing jars the reader more than coming upon words that are used incorrectly, subjects and verbs that do not agree, or misplaced modifiers that muddle the meaning of a sentence. This chapter discusses, in alphabetical order, the grammar rules and style principles you will encounter most frequently. Many topics mentioned in this section are discussed in depth in other sections of the *CDC Style Guide*.

Active Voice and Passive Voice

A verb is in the active voice when the performer of the act is the subject of the sentence. A verb is in the passive voice when the performer of the act is the object of the sentence.

Active voice: The physician **examines** the patient.

Passive voice: The patient **is examined by** the physician.

As a rule, use the active voice because it is more accurate, direct, precise, and interesting. Active voice is shorter and easier to read; it also flows better. The passive voice traditionally was the norm in technical writing because it was considered to be more scientific or objective. Most journals now encourage the use of the active voice.

However, the passive voice is preferred in the following circumstances, when:

- The subject is unknown.
Example: A memo was circulated in the office.
- The subject is irrelevant to the matter or obvious.
Example: The samples are being analyzed.
- The emphasis needs to be on the object, not the subject.
Example: Smallpox was eradicated in 1980.

Grammar is the prism
through which all
writing is refracted.

Patricia Robertson

Dangling, Misplaced, and Squinting Modifiers

A modifier is a word or phrase that describes another word or phrase in the sentence. A modifier should be placed close to the word or group of words it modifies.

Dangling Modifier

A dangling modifier occurs when a word or phrase is implied rather than stated in a sentence. Adding the proper word or rephrasing the sentence can correct the mistake.

Incorrect: Having compiled all the data by hand, his results were illegible.

Correct: Because he had compiled all the data by hand, his results were illegible.

Misplaced Modifier

Misplaced words or phrases can result in ambiguous, humorous, or absurd statements.

Incorrect: She went into the hospital after being bitten by a spider in a bathing suit.

Correct: She went into the hospital in a bathing suit after being bitten by a spider.

Incorrect: The patient was referred to a psychiatrist with severe emotional problems.

Correct: The patient with severe emotional problems was referred to a psychiatrist.

Squinting Modifier

The imprecise placement of a modifier yields a squinting modifier. Be careful with modifiers such as *almost*, *exactly*, *even*, *hardly*, *just*, *merely*, *nearly*, *only*, *scarcely*, and *simply*. Their placement may alter the meaning of the sentence. Place the modifier to produce the meaning you intend to produce.

Examples: They were **only** asking about the vaccine. (*As if it were a minor issue*)

They were asking **only** about the vaccine. (*They asked about nothing else.*)

Only they were asking about the vaccine. (*No one else asked.*)

Each and Every

Each and *every* are always singular, whether they are used as indefinite pronouns or as modifiers.

Examples: **Each** of us **has** a task to complete.

Every epidemiologist, physician, and health official **is** dedicated to making this country safe and healthy.

Expletives

Expletives are not just four-letter words. The words *There* or *it* followed by a form of *to be* also are called expletives. Starting a sentence with an expletive often results in unnecessary verbiage. To be clear and concise, avoid expletives.

Avoid: There is evidence to suggest that smoking causes stomach cancer.

Use: Evidence suggests that smoking causes stomach cancer.

Avoid: It is often difficult to find links between diseases and the environment.

Use : Finding links between diseases and the environment is often difficult.

Imperative Mood

To emphasize recommendations and suggestions, use the imperative mood.

Weak: It is recommended that a committee be formed to study the cause of the fire.

Better: Form a committee to study the cause of the fire.

Parallelism

In parallel constructions, nouns must be parallel with nouns, verbs with verbs, adjectives with adjectives, and so on. Faulty parallelism is common and results in muddled communication.

Not parallel: Leave your name, number, and a brief message.

Parallel: Leave **your name, your number, and a brief message**.

Parallel: Leave your **name, number, and message**.

Not parallel: The scientist's goals were to find a cure and developing a vaccine.

Parallel: The scientist's goals were **to find** a cure and **to develop** a vaccine.

Parallel: The scientist's goals were **finding** a cure and **developing** a vaccine.

Not parallel: The proposed design is inefficient, invalid, and a danger to people's health.

Parallel: The proposed design is **inefficient, invalid, and dangerous** to people's health.

Correlative pronouns (both . . . and, either . . . or, neither . . . nor, not only . . . but also, whether . . . or) also must be parallel. For example, if a preposition applies to both elements, either place it before the first correlative or include it in both elements.

Not parallel: He was critical neither of the study design nor the results.

Parallel: He was critical **neither of** the study design **nor of** the results.

Parallel: He was critical of **neither** the study design **nor** the results.

Bulleted lists also must be parallel. The first item in each bullet must be in the same grammatical category.

Not parallel: A healthy lifestyle includes the following:

- Eating right.
- Avoidance of sweets.
- Exercise daily.
- Getting enough rest.

Parallel: A healthy lifestyle includes the following:

- **Eating** right.
- **Avoiding** sweets.
- **Exercising** daily.
- **Getting** enough rest.

Passive Voice

See “Active Voice and Passive Voice” on page 5.

Possessive

General Rule

The possessive of most singular nouns is formed by adding an apostrophe and an *s* (*'s*). The possessive of most plural nouns (except for a few irregular plurals) is formed by adding an apostrophe only.

Examples: the center's director
the laboratories' conclusions
the children's health

Singular Noun

For a singular noun, add 's, even if the noun already ends with an *s*.

Examples: the researcher's conclusion
the fox's fur
the virus's origin

Plural Noun

For a plural noun ending with an *s*, add an apostrophe only; do NOT add an extra *s*.

Examples: the researchers' conclusions
the foxes' fur
the viruses' origins

For a plural noun not ending with an *s*, add 's only.

Examples: women's health
the data's accuracy
five sheep's wool

Nouns Ending and Starting With an S Sound

If the first noun ends with an *s* (or an *s* sound) and the second noun starts with one, rephrase the sentence to avoid awkward pronunciation.

Awkward: the Congress's situation
Use: the situation of Congress

Awkward: the analysis's significance
Use: the significance of the analysis

However, if the final *s* (or *x* or *z*) of the first word is silent, insert 's to yield the proper pronunciation.

Examples: Lemieux's science
Arkansas's situation
Descartes's theories

Special Case—Eponyms

Eponyms, which are nouns derived from proper names of people, are common in scientific literature (Hansen's disease, Pascal's triangle). Although the possessive has been used traditionally in eponyms, the trend is to eliminate it. For example, the National Down Syndrome Society spells the condition without the apostrophe.

Following is a list of terms commonly used, with their *preferred* spellings.

Alzheimer disease	Crohn disease	Down syndrome
Graves disease	Hodgkin disease	Parkinson disease
Reye syndrome	Wilms tumor	

If the term includes more than one person, do not use the apostrophe.

Incorrect: Creutzfeldt-Jacob's disease

Correct: Creutzfeldt-Jacob disease

Note: Achilles' heel BUT Achilles tendon

The following table summarizes the rules of the possessive. ▼

Noun	Rule
Singular Noun	Add 's. the pill's effectiveness the box's location the lens's cost
Plural Noun	For nouns ending with s or es, add apostrophe only. the pills' effectiveness the boxes' location the lenses' cost For nouns not ending with s, add 's. men's cancer rates the bacteria's origins deer's ticks
Two Nouns	If the first noun ends with an s (or s sound) and the second noun starts with one, rephrase the sentence. the strength of the analysis (NOT <i>the analysis's strength</i>) If the first noun ends with a silent s, x, or z, add 's to yield the proper pronunciation. Descartes's century Lemieux's lectures
Eponym	The tendency is to move away from using the possessive. Weber law (NOT <i>Weber's law</i>)

Preposition at End of Sentence

You may be familiar with a rule that says not to end a sentence with a preposition. When confronted with the rule, Winston Churchill said, “This is the sort of pedantry up with which I will not put.” Although you should not abuse the practice, ending a sentence with a preposition can be appropriate.

Example: CDC provides health information people can count on.

Pronouns and Antecedents

You can shorten sentences by using pronouns, but be sure they have clear antecedents. For example, in the preceding sentence the antecedent of the pronoun *they* is unclear. Does it refer to *sentences* or to *pronouns*? Sometimes you have to rephrase the sentence or repeat the word.

Correct: You can shorten sentences by using pronouns, but be sure the pronouns have clear antecedents.

Punctuation

See the “Punctuation” chapter on page 37.

Redundancy

Redundancy is the use of several words that mean the same thing when one word would suffice. Redundancies make your writing seem careless and sloppy. Some redundancies are so common that you may be unaware of them, such as *reverting back* (you can only revert back) or *general consensus* (there is no other type of consensus). However, once you are aware of the problem, it is easy to correct. For a list of common redundancies, see the “Tautologies and Redundancies” section on page 77.

Sentence Length

Try to vary the length of your sentences; this will help delineate your ideas and maintain your readers' interest. Sentences that are all the same length are monotonous; sentences that are too short produce a choppy effect; and sentences that are too long are difficult to follow.

Sentence length also affects the readability of your material, which is something to consider if you are writing at a specific reading level. To assess the readability of a document, use the SMOG readability formula, which can be accessed at www.cdc.gov/od/ads/smog.htm.

Subject and Verb Agreement

Sometimes it is difficult to decide whether a verb should be singular or plural. The following list provides some guidance.

The number of, the total number of: the verb is singular.

Examples: **The number of** samples **was** unknown.
 The total number of cases **was** hard to predict.

A number of, a total of: the verb is plural.

Examples: **A number of** patients **were** examined.
 A total of 50 vials **were** sent to the laboratory.

As well as, in addition to, along with: the verb agrees with the main subject only.

Example: **Rubella**, as well as chickenpox, **is** contagious.

Or, neither . . . nor, either . . . or: the verb agrees with the subject closest to the verb.

Examples: The physicians or the **nurse has** to be present.
 The physician or the **nurses have** to be present.
 Neither the medication nor the **hospital stays were** helpful.
 Neither the hospital stays nor the **medication was** helpful.

None, other quantities: the agreement of the verb is context dependent.

None: **None of the medication was** taken.
 None of the symptoms were present.

Quantities: **Half** of the **pill was** enough.
Half of the **patients were** sent home.

Singular and Plural of Non-English Words

Many scientific terms are derived from other languages, particularly Latin and Greek. The plural forms of non-English terms often follow the rules of the original language. Following is a sample list of such terms. Because usage varies by publication, some terms have alternate plural spelling. For a more complete list, see the “Plural Endings from Non-English Languages” section of the *CBE Manual for Authors, Editors, and Publishers* (6th edition, page 88). ▼

<i>Singular</i>	<i>Preferred Plural</i>	<i>Acceptable Plural</i>
alga	algae	...
appendix	appendices	appendixes
criterion	criteria	criteria
datum	data	...
femur	femora	femurs
genus	genera	...
index	indexes	indices (in economics and mathematics)
insignia	insignia	insignias
phenomenon	phenomena	...
thorax	thoraxes	thoraces
medium	media	mediums
vertebra	vertebrae	vertebras

Split Infinitives

In general, avoid awkward constructions that split infinitive forms of a verb (to leave, to help) or compound forms (had left, are found out).

Avoid: She was ordered to immediately leave on an assignment.

Use: She was ordered **to leave** immediately on an assignment.

However, there are occasions when a split infinitive is necessary to convey meaning.

Examples: He wanted to really help his mother.

That/Which/Who

These pronouns are not interchangeable.

That and *which* refer to animals, things, or anonymous groups of people. Use *that* to introduce a restrictive (defining, limiting) phrase and *which* to introduce a nonrestrictive (parenthetical, nondefining) phrase. Insert commas before and after nonrestrictive phrases.

Hint: If the clause being introduced by *that* or *which* could be omitted or put in parentheses, use *which*. Otherwise, use *that*.

Who refers to people and animals with names or special talents. *Who* can introduce restrictive and nonrestrictive clauses.

That: The samples **that** he analyzed had been stored for 2 weeks. (The clause *that he analyzed* defines the noun *samples*; it tells which samples had been analyzed.)

Which: The samples, **which** he analyzed, had been stored for 2 weeks. (*Which* introduces extra information that could be dropped without affecting the sentence.)

Who: The giant pandas Lun Lun and Yang Yang, **who** came to Atlanta in 1999, attract a lot of visitors.

Tip: Who or Whom?

Correctly Choosing Who or Whom

1. Locate the main clause (in bold here).
 - a. He is the one [who/whom] **found a cure**.
 - b. He is the one [who/whom] **everyone admires**.
2. Drop *who* or *whom* from the main clause, you are left with a gap.
 - a. _____ found a cure.
 - b. everyone admires _____.
3. If *he* makes sense in the gap, *who* is correct; if *him* makes sense, *whom* is correct.
 - a. **he found a cure** makes sense; therefore, the correct word is *who*.
 - b. **everyone admires him** makes sense; therefore, the correct word is *whom*.

Who/Whom

The distinction between *who* and *whom* is often lost. However, these pronouns are not interchangeable; *who* stands for the subject of a clause, whereas *whom* replaces the object of a sentence.

Who: Marie Curie is a scientist who won two Nobel prizes. (*Who* stands for *Marie Curie*, the subject of the sentence.)

Whom: Marie Curie is a scientist whom we all heard about. (*Whom* replaces *scientist*, the object of the sentence.)

Wordiness

Effective writing is concise and to the point. As W. Somerset Maugham said, “Stick to the point, and, whenever you can, cut.” Use the minimum number of words for the maximum effect. One key is to use strong verbs in the active voice and to limit the use of nouns, adverbs, adjectives, and buzz words. See the “Jargon” section on page 73 for examples of wordiness and their alternatives.

Weak: It is very important for all necessary precautions to be followed scrupulously.

Better: Follow all precautions.

Weak: A considerable number of people are utilizing the test at the present time.

Better: Many people are using the test now.

2 Mechanics

This chapter covers the use of abbreviations, acronyms, capital letters, and type styles. Although some rules are set, others are more flexible and depend on convention. For example, some manuals advocate the use of the article *the* in front of an acronym, others do not.

The rules mentioned in this section reflect long-standing CDC usage (we say *CDC* and not *the CDC*). However, as usual, the most important rule is to be consistent throughout the document and to use common sense over dogma.

Abbreviations

To ensure proper comprehension follow these rules: use abbreviations sparingly in text, never start a sentence with an abbreviation, and insert a period after most abbreviations. Following are examples of the correct use of abbreviations.

Addresses and U.S. States

In Letter Writing

On envelopes or in letters you can either abbreviate or spell out addresses. However, always abbreviate directions (N.E.). To abbreviate states, use the two-letter postal code (GA, MT).

Note: The policy of the Office of the Executive Secretariat is NOT to use abbreviations with addresses, neither on the envelope nor in the body of the letter, except for directions.

Non-abbreviated Example

Centers for Disease Control and
Prevention

1600 Clifton Road, N.E., Mailstop D-14
Atlanta, Georgia 30333

Abbreviated Example

Centers for Disease Control and
Prevention

1600 Clifton Rd., N.E., MS D-14
Atlanta, GA 30333

“Tis better to be brief
than tedious.”

Shakespeare

In Text

In text, spell out names of U.S. states when they stand alone or are used after a county. When a city and state are inside a sentence, place commas after the city and the state. Spell out the name of the state after the city or use standard abbreviations (see the list of abbreviations on page 19). Use the two-letter postal code (GA, MT) with ZIP codes only.

Examples: They live in Fulton County, Georgia, but near the DeKalb line. (NOT *Fulton County, GA*)

The agency is headquartered in Atlanta, Georgia, and has 10 regional offices.

The agency is headquartered in Atlanta, Ga., and has 10 regional offices. (NOT GA)

Use the abbreviation *U.S.* only as an adjective; spell out *United States* when it is used as a noun.

Examples: The latest U.S. figures show that one out of every four deaths results from cancer.

In the United States, one out of every four deaths results from cancer.

Include the name of the state at the first mention of the city if the clarification is important. Do not include the name of the state if it would be redundant. Do not include the city if it is irrelevant.

Examples: The chemical leak occurred in Paris, Texas. (Several cities share that name.)

She studied at the University of Virginia in Charlottesville. (Adding *Virginia* after the city is redundant.)

The Centers for Disease Control and Prevention released new guidelines. (*Atlanta* is irrelevant.)

Following is a list of standard and postal abbreviations for U.S. states, including freely associated states. ▼

<i>State</i>	<i>Abbreviation</i>	<i>Postal Code</i>	<i>State</i>	<i>Abbreviation</i>	<i>Postal Code</i>
Alabama	Ala.	AL	Missouri	Mo.	MO
Alaska	Alaska	AK	Montana	Mont.	MT
American Samoa	Amer. Samoa	AS	Nebraska	Nebr.	NE
Arizona	Ariz.	AZ	Nevada	Nev.	NV
Arkansas	Ark.	AR	New Hampshire	N.H.	NH
California	Calif.	CA	New Jersey	N.J.	NJ
Colorado	Colo.	CO	New Mexico	N.M.	NM
Connecticut	Conn.	CT	New York	N.Y.	NY
Delaware	Del.	DE	North Carolina	N.C.	NC
District of Columbia	D.C.	DC	North Dakota	N.Dak.	ND
Federated States of Micronesia	F.M.	FM	Northern Mariana Islands	M.P.	MP
Florida	Fla.	FL	Ohio	Ohio	OH
Georgia	Ga.	GA	Oklahoma	Okla.	OK
Guam	Guam	GU	Oregon	Ore.	OR
Hawaii	Hawaii	HI	Palau	P.W.	PW
Idaho	Idaho	ID	Pennsylvania	Pa. or Penna.	PA
Illinois	Ill.	IL	Puerto Rico	P.R.	PR
Indiana	Ind.	IN	Rhode Island	R.I.	RI
Iowa	Iowa	IA	South Carolina	S.C.	SC
Kansas	Kans.	KS	South Dakota	S. Dak.	SD
Kentucky	Ky.	KY	Tennessee	Tenn.	TN
Louisiana	La.	LA	Texas	Tex.	TX
Maine	Maine	ME	Utah	Utah	UT
Marshall Islands	M.H.	MH	Vermont	Vt.	VT
Maryland	Md.	MD	Virginia	Va.	VA
Massachusetts	Mass.	MA	Virgin Islands	V.I.	VI
Michigan	Mich.	MI	Washington	Wash.	WA
Minnesota	Minn.	MN	West Virginia	W. Va.	WV
Mississippi	Miss.	MS	Wisconsin	Wis.	WI
			Wyoming	Wyo.	WY

Formal Titles and Academic Degrees

Abbreviate formal titles (e.g., Dr., Mr., Mrs., Ms.) in front of a last name. However, spell out *Doctor* and *Professor* if they start a sentence or if they do not immediately precede a last name.

Examples: We met Dr. Archer at the conference.
 Doctor Archer attended the conference.
 Stephen W. Hawking is the Lucasian Professor of Mathematics at Cambridge University.

Academic degrees (M.P.H., Ph.D.) are usually abbreviated. Do not include both an academic degree and *Dr.* with one name.

Example: Beverly Crusher, M.D., M.P.H. (NOT *Dr. Beverly Crusher, M.D., M.P.H.*)

Journal Titles

For a scientific audience, abbreviate the names of journals in reference lists according to the National Library of Medicine's *Index Medicus* at www.nlm.nih.gov/tsd/serials/lji.html. Do not italicize these abbreviations. For more details, see the "Reference Style" chapter on page 121.

For lay audiences (including Congress) and in texts, spell out and italicize the names of journals.

Mathematical Symbols

In text, avoid using mathematical symbols; use words instead. For more details on using mathematical symbols, see the "Numbers" chapter on page 31.

Avoid: We examined 90+ patients.
Use: We examined more than 90 patients.

Scientific Terms

The list of abbreviations commonly used in the scientific field (such as units of measure or technical terms) is too large to be included here. An exhaustive list can be found in the *AMA Manual of Style* (9th edition, chapter 11).

Acronyms

Acronyms, unlike abbreviations, are not followed by periods.

When to Use Acronyms

Spell out the term on first reference, followed by its acronym in parentheses. Use the acronym in the rest of the document.

Example: The Centers for Disease Control and Prevention (CDC) is testing the samples. According to CDC, the result should be available in 48 hours.

If the expanded form includes a possessive, do not include the possessive in the parentheses.

Example: The Centers for Disease Control and Prevention's (CDC) guidelines are listed on the Internet.

When to Use *the* With Acronyms

Omit the article *the* when the acronym is pronounced as a word (e.g., OSHA, NIOSH). If the acronym is not pronounced as a word, the rule depends on usage. The preferred usage at CDC is to omit the article in front of most acronyms unless it looks or sounds odd.

Incorrect: The NIOSH conducts research on occupational diseases and injuries.

Correct: NIOSH conducts research on occupational diseases and injuries.

Acceptable: At the CDC, we work hard to make people safer and healthier.

Preferred: At CDC, we work hard to make people safer and healthier.

When NOT to Use Acronyms

If a term appears only once or a couple of times in the document, spell it out rather than use the acronym. Remember that the use of many acronyms in a single document can impede comprehension and result in an "alphabet soup."

Some terms such as HIV or AIDS are so familiar that they do not need to be spelled out.

Avoid acronyms at the beginning of a sentence, in a title, or a heading, unless the acronym spells out a word (AIDS) or stands for an agency.

Avoid: Council for Scientific Research (CSR)

Use: Council for Scientific Research

Acronyms for CDC Centers, Institute, and Offices

The following table gives an overview of CDC's organizational components, as of August 2003. ▼

National Center on Birth Defects and Developmental Disabilities	(NCBDDD)	provides national leadership for preventing birth defects and developmental disabilities and for improving the health and wellness of people with disabilities
National Center for Chronic Disease Prevention and Health Promotion	(NCCDPHP)	prevents premature death and disability from chronic diseases and promotes healthy personal behaviors
National Center for Environmental Health	(NCEH)	provides national leadership in preventing and controlling disease and death resulting from interactions between people and their environment
National Center for Health Statistics	(NCHS)	provides statistical information that will guide actions and policies to improve the health of the American people
National Center for HIV, STD, and TB Prevention	(NCHSTP)	provides national leadership in preventing and controlling human immunodeficiency virus infection, sexually transmitted diseases, and tuberculosis
National Center for Infectious Diseases	(NCID)	prevents illness, disability, and death caused by infectious diseases in the United States and around the world
National Center for Injury Prevention and Control	(NCIPC)	prevents death and disability from nonoccupational injuries, including those that are unintentional and those that result from violence
National Immunization Program	(NIP)	prevents disease, disability, and death from vaccine-preventable diseases in children and adults
National Institute for Occupational Safety and Health	(NIOSH)	ensures safety and health for all people in the workplace through research and prevention
Epidemiology Program Office	(EPO)	strengthens the public health system by coordinating public health surveillance; providing support in scientific communications, statistics, and epidemiology; and training in surveillance, epidemiology, and prevention effectiveness
Public Health Practice Program Office	(PHPPPO)	strengthens community practice of public health by creating an effective workforce, building information networks, conducting practice research, and ensuring laboratory quality

Capitalization

Capitalizations within sentences should be used sparingly and accurately. In general, avoid unnecessary capitals because they slow the reading process. Use a capital letter only if you can justify it by one of the principles listed below.

Bulleted Lists

Capitalize the first word of each bulleted item.

Example: Take the following precautions to protect yourself from UV exposure:

- Limit direct sun exposure during midday.
- Cover up.
- Wear a hat.
- Use a sunscreen with an SPF of 15 or higher.

Compass Points

Capitalize *north*, *south*, *east*, and *west* when they designate regions but not when they designate directions.

Examples: Chicago is in the Midwest, but Atlanta is in the Southeast.

Acupuncture comes from the Far East.

Amicalola Falls State Park is in North Georgia.

The airport is 10 miles southwest of town.

Cross-references in Text

Capitalize nouns (e.g., table, figure, chapter, volume, appendix) if they are used as designators in the text and followed by a number or letter.

Examples: As described in Table 2

The cancer cells were spreading (Figure A)

Consult Volumes 2–4

See Chapter 5, Section B

When referring in general terms to a section or chapter do not capitalize these words. However, when referring specifically to the title of a section or chapter, capitalize the title as it appears originally and enclose it in quotation marks.

- Examples:** See the chapter on genetics. (*chapter* is set in lowercase because it is a designator and not a title.)
 See Chapter 2 on genetics. (*Chapter* is capitalized because a number follows it.)
 See the “Genetics” chapter. (*Genetics* is capitalized and in quotation marks because it is the title of that chapter.)
 See the next chapter, “Punctuation,” for more. (Note the commas.)

Set the words *line* and *page* in lowercase.

Example: The section starts on page 25, line 12.

Diseases and Microorganisms

When an eponym is included in the name of the disease, syndrome, or other term, do not capitalize the second word.

Parkinson disease

Down syndrome

Do not capitalize eponyms referring to units of measure or other well-established common usage terms. Do not capitalize eponyms derived from proper nouns (and used as adjectives).

curie

joule

caesarean delivery

fallopian tube

addisonian crisis

parkinsonian tremor

For microorganisms, except viruses, capitalize the singular genus name but not the specific epithet, and italicize both. Do not capitalize or italicize the genus name in the plural. Do not capitalize or italicize the name of viruses.

- Examples:** Tuberculosis is caused by the bacterium *Mycobacterium tuberculosis*.
 The genus *Ehrlichia* includes seven recognized species. (Singular)
 A number of other ehrlichiae also cause diseases in animals. (Plural)
 The hepatitis B virus attacks the liver.

First Word of a Quotation

Quoted material should respect the original form. Usually the first word of a quote is capitalized. However, if the quotation is integrated into the sentence, you may want to use lowercase.

- Examples:** The article noted, “More than 2 million screening tests were provided.”
 The article noted that “more than 2 million screening tests were provided.”

Geographic Names

Capitalize all geographic locations, including cities, counties, states, regions, countries, continents, bodies of water, mountains, forests, canyons, dams, parks, and streets. Following are some examples.

the Antarctic	the Atlantic Ocean	the Bay Area
Central Africa	the Great Lakes	the Gulf of Mexico
the Hoover Dam	Hudson Bay	Lake Ontario
Mexico City	the Mississippi River	New York State
the South Pole	Yellowstone National Park	the West Coast

Although a common noun (sea, ocean, park, river) used with a geographic name is capitalized in the singular, it is not capitalized in the plural.

Examples: the Mississippi River
 the Mississippi and Missouri rivers

Government Agencies, Businesses, and Other Institutions

Capitalize the names of government agencies, businesses, and other institutions. Do not capitalize conjunctions, articles, or prepositions of three or fewer letters unless they start a sentence.

Congress the U.S. government the U.S. Army
 the International Committee of the Red Cross (NOT *Of The Red Cross*)

For names of institutions, do not capitalize the article *the* unless it is part of the official title.

Examples: He gave a speech at The Johns Hopkins University.
 He gave a speech at the University of Virginia.

When the name of the institution is used as a common noun, do not capitalize it.

Example: In 1990, she graduated from the University of Virginia. After she left the university, she moved to Atlanta.

Note: Do not capitalize *federal*, *state* and *local*, unless they start the sentence.

Example: The task force advises federal, state, and local governments.

Proprietary Names

Capitalize proprietary names of drugs and products, but do not include the trademark symbol. Do not capitalize the generic names of drugs.

Example: The physician prescribed Tylenol (acetaminophen).

Seasons and Holidays

Capitalize holidays and calendar events, but do not capitalize seasons.

Labor Day Fourth of July summer fall

Sociocultural Derivatives

Capitalize names of languages, peoples, races, ethnic groups, nationalities, political parties, and religions. However, do not capitalize *white* or *black* when referring to race.

the English language

French people

African Americans (BUT *blacks*)

Democrats and Republicans

Buddhist monks

Titles of Books, Essays, Headings, and Conferences

Capitalize major words and two-letter verbs (do, go, be). Do not capitalize the *to* of the infinitive, conjunctions, articles, or prepositions of three or fewer letters, unless they begin a sentence. Italicize titles if they are in running text.

Examples: What Is Rheumatoid Arthritis? (A stand-alone title is not italicized.)
 How to Treat Ear Infections in Small Children
 Call the toll-free number to order *What Is Rheumatoid Arthritis?* (A title inside a sentence is italicized.)

Capitalize both parts of dual verbs.

Examples: Gearing Up for a Healthier Lifestyle
 Following Up on the Anthrax Scare

Do not capitalize the second part of hyphenated words.

Examples: Follow-up on the AIDS Vaccine
 Long-term Effects of Radiation Exposure

Titles of Persons

Capitalize only formal titles used directly before a person's name.

Examples: In 1933, President Roosevelt said, "The only thing we have to fear is fear itself."
 The president said, "The only thing we have to fear is fear itself."

In general, do not capitalize long titles; separate them from the individual's name with a comma.

Example: William Riker, the undersecretary of the cabinet, was the guest speaker.

The following table summarizes the use of capitals and lowercase letters. ▼

	<i>Capital Letter</i>	<i>Lowercase Letter</i>
Bulleted Lists	Take these precautions: ■ Limit direct sun exposure. ■ Cover up. ■ Wear a hat.	
Compass Points	the South (a region)	turn south (a direction)
Cross-references in Text	Table 2, Chapter 5 see Chapter 5 on numbers see the “Numbers” chapter	this table, this chapter see the chapter on numbers go to page 10, line 2
Diseases and Microorganisms	Parkinson disease <i>E. coli</i>	parkinsonian gait coliform bacteria group
First Word of a Quotation	He said, “We are ready.”	He said that “we are ready.”
Geographic Names	Atlantic Ocean	the ocean
Government Agencies, Businesses, and Other Institutions	Congress the U.S. government the Republican Party the Iowa State Supreme Court the University of Virginia	congressional the government the party the state supreme court the university
Proprietary Names	Amoxyl (brand name)	amoxicillin (generic name)
Seasons and Holidays	Memorial Day	spring, winter
Sociocultural Derivatives	Native American, Hispanic	black, white
Titles of Books, Essays, Headings, and Conferences	<i>A Brief History of Time</i>	<i>The Long-term Benefits of Exercise</i> (Do not capitalize <i>to</i> of the infinitive, conjunctions, articles, or prepositions of three letters or less unless they start a sentence.)
Titles of Persons	President Roosevelt	the president

Type Styles (Bold, Italics, Underline, and All Caps)

Bold, *italics*, underline, and ALL CAPS are common features to help you alter the look of a document. Use these elements sparingly and with caution. If used incorrectly or too frequently, these features will distract from the flow of the words.

Using Type for Emphasis

To emphasize a point, use **bold** and *italics* instead of underlining or ALL CAPITAL LETTERS. Underlined text is more difficult to read and should be avoided. For the same reason, DO NOT WRITE EXTENDED AMOUNTS OF TEXT IN ALL CAPS. Use all caps only for short titles. In the rare instances where you have to use all caps in a text, use short words and bold them (e.g., **DANGER!**).

Italics

Italics are used for emphasis and in the following contexts:

Titles

When referencing in a document, italicize titles of books, magazines, newspapers, journals, pamphlets, films, television and radio programs, software programs, works of art, ships, and planes. All other titles are enclosed in quotation marks. *Note:* Do not italicize titles if they appear in references at the end of a document. For more information, see the “Reference Style” chapter on page 121.

<i>New York Times</i>	<i>Federal Register</i>	<i>Meet the Press</i>
<i>Excel</i>	<i>USS Enterprise</i>	<i>Picasso’s Guernica</i>

Legal References

In a text, the names of cases, federal regulations, congressional hearings, and laws are written in the following manner. *Note:* Do not italicize these if they appear in references at the end of a document.

<i>Case:</i>	<i>Wilcox v United States</i> , 387 F2d 60 (5th Cir 1967)
<i>Federal Regulation:</i>	<i>66 Federal Register</i> 7068 (2001) (codified at 25 C.F.R. §15)
<i>Hearing:</i>	<i>Field Hearing on Air Quality and Health Impacts of the September 11 Attack on the World Trade Center</i> , 107th Cong., 1st Sess. (2002) (testimony of U.S. Representative Jerrold Nadler, D-NY)

The names of statutes are not italicized.

Example: Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §9601-9675 (1988)

Non-English Words and Phrases

Many foreign words are now part of the English language and are not italicized.

However, italicize the words and phrases that have not been assimilated.

in vitro	in vivo	versus
<i>tour de force</i>	<i>coup d'état</i>	<i>incommunicado</i>

Scientific Terms

Some scientific terms are italicized for clarification or because they are foreign words.

The rules for italicizing organisms are elaborate; we will mention only the most common rules. For more details, consult the “Nomenclature” chapter in the *AMA Manual of Style* (9th edition).

Italicize names of bacterial organisms, parasites, and strains in the singular. Capitalize the first word only.

Examples: the common human pathogen *Helicobacter pylori*
 the malaria parasite *Plasmodium vivax*
Escherichia coli O157:H7 (Use the letter *O* and not the numeral 0.)

If the names are used in the plural, use lowercase and do not italicize them. If you cannot determine the plural form, add the word organism or species after the italicized term.

Example: typing of group A streptococci

3 Numbers

Use numbers correctly in written documents to ensure accuracy and to avoid confusion. Various guidelines govern the use of numbers in text and help determine whether to use numerals (1, 2, 3, I, II, III) or words (one, two, three).

Because the recording of numbers is based more on conventions than on rules, different sources adhere to different conventions. Therefore, use common sense, not dogma, when deciding which guidelines to apply. However, using the following guidelines promotes uniformity for all CDC documents.

For more details on the use of numbers, refer to the *AMA Manual of Style*.

Spelling Out Numbers

General Rule

In text, spell out numbers one through nine. Use numerals for 10 and above. Zero is usually spelled out, so as not to be confused with the letter *O*.

Examples: The virus infected five laboratory workers and seven animals.
The virus infected 10 laboratory workers and 12 animals.

When recording numbers in tables and figures—not in text—always use numerals. In addition, use numerals for units of measure (e.g., age, time, money) and forms of numbers (e.g., decimals, percents), even if they are below 10. For more details, see the “Using Numerals” section on page 33.

Examples: He came to the agency 2 years ago.
Toxic shock syndrome is fatal in 5% of cases.

Combination of Numbers Less Than and Greater Than 10

If you have a combination of numbers less than and greater than 10, treat related numbers alike.

“I have often admired
the mystical way of
Pythagoras and
the secret magic
of numbers.”
Sir Thomas Browne

Example: In 1997, two outbreaks of Ebola virus hemorrhagic fever resulted in 12 cases and 8 deaths. (Numerals are used for all related items because one of them is greater than nine. The first number is spelled out because it is unrelated and less than 10.)

Numbers Beginning a Sentence, Title, or Heading

Spell out the number if it starts a sentence, title, heading, or subheading. When a unit of measure or a symbol follows the number, it too must be spelled out. It is usually better to rephrase the sentence.

Correct: Eighty milligrams of aspirin per day can help prevent the recurrence of a heart attack.

Better: Taking 80 mg of aspirin per day can help prevent the recurrence of a heart attack.

If the number is a year, it can be expressed numerically.

Correct: 1980 marked the eradication of smallpox.

Better: The year 1980 marked the eradication of smallpox.

Consecutive Numbers

To avoid confusion or ambiguity in the case of two consecutive numbers that cannot easily be separated, spell out the one that is more easily understood in word form, or try to rephrase the sentence.

Example 1: The package contains twenty 50-mg pills.

Example 2: Out of five hundred, 200 were affected.

Better: Out of 500, a total of 200 were affected.

Large and Indefinite Amounts

Spell out indefinite numbers and amounts.

Examples: several hundred investigators
a few thousand people
thousands of people

Common Fractions

Spell out common fractions. Insert a hyphen only if the fraction modifies a noun.

Examples: Patients have adverse reactions to the medication in one third of the cases.
A two-thirds majority is needed. (NOT *two-third*)

Using Numerals

General Rule

In scientific text, express units of measure (e.g., age, time, money) and forms of numbers (e.g., decimals, percents) in numerals, even if they are below 10.

Examples: Preventing a cavity through water fluoridation costs about \$4.
Only about 6% of children 4 to 8 years of age ride in booster seats.

Units of Measure

The following table outlines the main units of measure, with examples. ▼

Age	at the age of 65 years adults over 18 years old the 79-year-old patient	five patients 65 years and older the patient, age 79 years, recovered children 5 to 9 years of age
Clock Time	6 p.m. noon (NOT 12 noon) 8 a.m. to 5 p.m.	6 o'clock (NOT 6 o'clock p.m.) noon to 1:30 p.m. (NOT 12 noon) 8:00 a.m. to 5:30 p.m. (NOT 8 a.m. to 5:30 p.m.)
Compound Modifier	a 6-foot-5-inch person	an 8-year-old study
Date	From October 2001 through January 2002, CDC investigated 100 cases. On February 5, 2002, he had a stroke. (NOT <i>February 5th</i>) See the March 2002 issue of <i>Nature</i> . See the March 29, 2002, issue of <i>MMWR</i> .	
Measurement Range	In a range of numbers, place the unit of measure after the second number only, except when there is no space between the number and the unit of measure. 5×10 ft 5'×10' 10–20 grams 10%–20% 70 to 80 mL 70°F–80°F	
Money	5¢ \$7 \$12.50 \$1,500 £30.5 million \$10 million OR \$10,000,000 Repeat the money symbol sign with each number. <i>Example:</i> Each tablet costs 10¢ to 50¢. For a mixture of cents and dollars, use the dollar sign. <i>Example:</i> Each tablet costs \$.90 to \$1.50. (NOT <i>90¢ to \$1.50</i>)	

Ordinals

Ordinals generally express ranking rather than quantity, so spell out *first* through *ninth*, and use the numeral for *10th* and above.

Examples: The fourth patient was admitted in critical condition.
The 12th patient died shortly after his arrival.

When you have a mixture of ordinals below and above nine, use numerals.

Incorrect: The fifth and the 12th patients showed similar symptoms.

Correct: The 5th and the 12th patients showed similar symptoms.

Percentages

Use the numeral and the % symbol for specific percentages. Do not insert a space between the numeral and the symbol (25%). When a number starts the sentence, spell out both terms.

Examples: Over 90% of the children were vaccinated.
Ninety percent of the children were vaccinated.

In a range of percentages, insert the symbol after each number. However, in a series of percentages, the symbol follows the last figure only.

Examples: Familial predisposition may be responsible for 5% to 10% of prostate cancers.
The government received discounts of 10, 20, and 30%.

Important: Only use the word *percent* with a number; otherwise, use the word *percentage*.

Incorrect: A substantial percent of the population does not get enough exercise.

Correct: A substantial percentage of the population does not get enough exercise.

Formatting and Style Issues

Following are explanations of issues that arise when dealing with numbers.

Punctuation

Abbreviated units of measure do not have a period, unless they close a sentence.

Examples: 50 mg (NOT 50 mg.) 2 dL (NOT 2 dL.)

Singular and Plural

When the quantity is less than 1, the unit of measure is singular.

Examples: 0.5 gram (NOT *grams*) 0.2 second (NOT *seconds*)

When an abbreviated unit of measure follows a quantity, the abbreviation is singular.

Examples: 3 L (NOT *3 Ls*) 200 g (NOT *200 gs*)

Spacing

Insert a space between the numeral and the symbol, except for %, °C, °F, ° (for angles), money symbols, fractions, and inches/feet symbols.

25 g	40 mL	60 kg
30%	28.5°C	4"
£250	CHF 50*	5½ years

*A space is added because CHF is the currency abbreviation for the Swiss Franc and not a symbol.

In mathematical operations or equations, insert a space before and after most symbols (e.g., +, =, ×, ≥).

$$E = mc^2 \qquad 50 \times 3 = 150$$

Tip: Word 2000 Shortcut

Inserting the μ and \times Symbols

Use μ and \times instead of the letters *u* and *x* for the microgram and multiplication symbols.

1. Place the cursor in the text where you want to insert the symbol.
2. On your toolbar, click **Insert**.
3. Select **Symbol**.
4. Select the **Symbols** tag. Under **Font**, scroll down and select **WP MATH A**.
5. Choose μ or \times (they are on the second line).
6. Click **Insert** and **Close**.

Note: Use the same technique for other symbols.

Subject and Verb Agreement

Units of measure are treated as collective nouns and require a singular verb.

Example: Four hundred micrograms of folic acid is recommended.
(NOT *are recommended*)

4 Punctuation

The rules of punctuation are strict and complex. Correct punctuation is critical to clear writing; incorrect punctuation can confuse the reader or alter the meaning of a sentence. Proper punctuation makes your text easier to understand, clarifies ambiguities, eliminates confusion, and accelerates the reading process.

The following list examines the most common types of punctuation problems. For a more detailed list, consult a grammar book. See the “Bibliography” section on page 149 for a list of grammar books.

Apostrophes

Apostrophes often are used incorrectly. However, you need to know only three simple rules to use apostrophes correctly every time: apostrophes are used in contractions and with possessive nouns, but NEVER to denote plural.

Use Apostrophes to Denote Contractions

The apostrophe stands for omitted letters or numbers.

Examples: We’re working on a cure.
The disease first appeared in the ’80s.

Because it is too colloquial, avoid using contractions in most business and professional documents. However, if you are writing brochures or pamphlets for the public, using contractions may be acceptable and even desirable; it can give the piece a more readable and approachable tone.

Use Apostrophes to Denote Possessive Nouns

The possessive case denotes ownership or possession and the apostrophe replaces the word *of* (*children’s health* stands for *the health of children*). Following are examples of possessive formation. For more details on how to form the possessive, see the “Possessive” section on page 8.

Punctuation is the
notation in the sheet
music of our words.

Pico Iyer

Examples: the vaccine's availability (singular noun)
 the virus's potency (singular noun ending with an *s*)
 the agencies' policies (plural noun ending with an *s*)
 women's health issues (plural noun not ending with an *s*)

NEVER Use Apostrophes to Denote Plural

This mistake, common with letters and dates, is even perpetuated by the *New York Times*, which uses the style “1990’s” instead of “1990s.” However, the *s* refers to a plural, NOT a possessive, and an apostrophe should not be used.

Incorrect: the ABC’s of good dental hygiene

Correct: the ABCs of good dental hygiene

Incorrect: The disease was eradicated in the 1970’s.

Correct: The disease was eradicated in the 1970s.

Brackets

Brackets and parentheses are not interchangeable. Use square brackets in a quotation to indicate words that are not part of the quote. Also use brackets to enclose words in a passage that are already in parentheses.

Examples: He added, “At the time the study was done [1998], we had no idea of the extent of the problem.”
 (polycyclic aromatic hydrocarbon [PAH] and polychlorinated biphenyl [PCB])

Colons

The most common use of colons is to introduce lists and quotes. A complete sentence must precede a colon, but a complete sentence does not have to follow a colon. Capitalize the first word after a colon only if it is a proper noun or if it starts a complete sentence.

Use Colons to Introduce Lists

Remember that a complete sentence must precede the colon.

Incorrect: A healthy lifestyle is based on: eating right and exercising. (A complete sentence does not precede the colon.)

Correct: A healthy lifestyle is based on two things: eating right and exercising. (A complete sentence precedes the colon.)

Use Colons to Introduce Quotes

However, if the introductory words do not form a complete sentence, use a comma.

Incorrect: George Bernard Shaw said: “I often quote myself. It adds spice to my conversation.” (A complete sentence does not precede the colon.)

Correct: George Bernard Shaw said something appropriate: “I often quote myself. It adds spice to my conversation.” (A complete sentence precedes the colon.)

Also Correct: George Bernard Shaw said, “I often quote myself. It adds spice to my conversation.” (A comma introduces the quote.)

Use Colons for Emphasis

Example: He had only one interest: genetic research.

Use Colons in Titles

Example: *The Hot Zone: A Terrifying True Story*

Do NOT Use Colons After Verbs

Incorrect: Some health risks associated with obesity are: high blood pressure and high blood cholesterol.

Correct: Some health risks associated with obesity are high blood pressure and high blood cholesterol.

Do NOT Use Colons After *Such as*, *Including*, and *Consists of*

Incorrect: Folic acid has been added to foods such as: enriched bread, pasta, rice, and cereals.

Correct: Folic acid has been added to foods such as enriched bread, pasta, rice, and cereals.

Commas

Commas are often misused. To ensure proper comma use and placement, first ask yourself about the rationale for the comma. If you cannot find one, do not insert a comma. If you are still not sure, look at the examples below to find a justification.

Use Commas With Introductory Elements

An introductory element is a word, phrase, or clause that appears at the beginning of the sentence, before the independent clause.

Examples: After the results came in, the physician contacted the patient.
However, the disease is not contagious.

Tip: Coordinating Conjunctions**Remember the Conjunctions**

F	for
A	and
N	nor
B	but
O	or
Y	yet
S	so

Use Commas With Contrasting Elements

Commas can emphasize two contrasting points or ideas in a sentence. Generally, a word introduces the contrast (e.g., not, but, yet, never, although).

Examples: He contracted the flu, not pneumonia.
We thought we had the result, but didn't.

Use Commas With Two Independent Clauses Joined by a Coordinating Conjunction

Only seven coordinating conjunctions exist in the English language. An easy way to remember them is with the acronym FANBOYS (for, and, nor, but, or, yet, so).

If you are not sure whether a comma is required, ask these two questions:

1. Can the two clauses stand by themselves?
2. Does the sentence have one of the FANBOYS?

If the answer is YES to BOTH questions, insert a comma before the conjunction.

Incorrect: The flu vaccine is available, and is being distributed locally.
(An independent clause does not follow the conjunction.)

Correct: The public health system is adequate, and the public can feel safe.
(Two independent clauses surround the comma.)

Use Commas With Coordinate Adjectives (Consecutive Adjectives)

Coordinate adjectives (two or more adjectives that modify a noun or pronoun) are separated by a comma. Adjectives are coordinated if you can switch their order without changing the meaning of the sentence or if you can insert *and* between the adjectives.

Incorrect: He had a big, cold sore. (The sore is not big and cold, the cold sore is big.
Because you cannot insert *and*, the adjectives are not coordinated.)

Correct: He had a big cold sore.

Incorrect: He had a big cold glass of water in his hand. (The glass is big and cold.
Because you can insert *and*, the adjectives are coordinated.)

Correct: He had a big, cold glass of water in his hand.

Use Commas With Nonrestrictive Elements

If the section of the sentence surrounded by commas can be removed from the sentence *without changing the meaning* of the sentence, use commas. Nonrestrictive elements usually occur in the middle of sentences and can be one or several words.

Example: The condition, which affects several million people every year, is preventable.

However, consider these examples:

Example 1: Editors who are too picky are a nuisance.

Example 2: Editors, who are too picky, are a nuisance.

Example 1 is restrictive because it is limited only to the picky editors (not all editors are picky). Example 2 is nonrestrictive because it implies that all editors are picky.

Both sentences are grammatically correct. However, the absence or presence of the commas changes the meaning of the sentences. The issue here is not placing the commas in the right or wrong spots, but using or omitting them to convey the *intended* meaning.

Use Commas With Dates and Geographic Locations

When writing the complete date, put a comma before and after the year.

Example: He attended a symposium in Paris, France, on March 10, 2002, and returned on March 15, 2002.

Do not place a comma between month and year.

Example: Toxic fumes were released between December 2001 and February 2002.

Use Commas With Series and Lists

Use commas to separate series of three or more terms. Also insert a comma before the last conjunction (called a serial comma).

Example: Eat a balanced meal, exercise, drink plenty of fluids, and avoid stress.

Use Commas With Direct Quotes

Often, a colon introduces a quote. However, if the introductory words do not form a complete sentence, use a comma.

Incorrect: Louis Pasteur said: “Chance favors only the prepared mind.”
(A complete sentence does not precede the colon.)

Correct: Louis Pasteur said, “Chance favors only the prepared mind.”
(A comma introduces the quote.)

Use Commas With Attribution

In most cases, use a comma instead of a period at the end of a quote that precedes an attribution.

Example: “We have the situation under control,” the health official said.

Use Commas With Age, Degrees, and Titles

Examples: Ben Sisko, 45, attended the seminar.
 Phil McGraw, Ph.D., was the guest speaker.
 Jonathan Archer, vice-chair, attended the hearing.

Use Commas With Large Numbers

Use a comma with figures greater than 999, except in addresses.

Examples: He collected 1,243 samples for his test.
 CDC's main campus is located at 1600 Clifton Road.

Tip: Word 2000 Shortcut

Inserting the en or em Dash

Place the cursor where you want to insert the symbol in the text.

1. On your toolbar, click **Insert**.
2. Select **Symbol**.
3. Under **Font**, select **(normal text)**.
4. Scroll down until you find the appropriate symbol.
5. Click on the symbol.
6. Click **Insert** and close the window.

Dashes

There are two dashes of different lengths: the *en* dash (–), and the *em* dash (—). The hyphen (-), technically not a dash, often is used incorrectly in lieu of a dash (for more details, see the “Hyphens” section on page 43). However, these elements should NOT be used interchangeably, as the examples below illustrate.

Note: Do not insert a space between the dash and its surrounding elements.

En Dash

Use the *en* dash to indicate ranges.

Examples: 1990–1995 12–15 mg 40%–50%

Em Dash

Use the *em* dash for emphasis, to indicate a change in thought, or to separate a series of words.

Examples: He came to the meeting—for the first time ever—and spoke up.
 We will have the results of the tests soon—if the laboratory is open.
 He mentioned the benefits—improved muscle tone and weight loss—of regular exercise.

Ellipses

An ellipsis indicates the deletion of words in text or in a quote. An ellipsis is made up of three periods separated from each other and from surrounding text by a space (. . .).

Example: We have not journeyed across the centuries . . . because we are made of sugar candy.

In the preceding quote by Churchill, the words omitted are, “across the oceans, across the mountains, across the prairies.”

If a new sentence starts after the ellipsis, use four periods. Do not insert a space before the first period.

Example: We shall fight on the beaches. We shall fight on the landing grounds. . . .
We shall never surrender!

Churchill’s complete quote was, “We shall fight on the beaches. We shall fight on the landing grounds. We shall fight in the fields, and in the streets, we shall fight in the hills. We shall never surrender!”

Hyphens

A hyphen connects words to make them more understandable. Some words are always hyphenated (state-of-the-art, up-to-the-minute); others are temporarily hyphenated to clarify or prevent ambiguity (well-known, re-create). A compendium of frequently occurring hyphen use follows. For a more complete list of rules, consult the *AMA Manual of Style*.

Hyphenate Nouns Combined With Adjectives

Example: A fat-free, high-fiber, low-cholesterol diet will help you lose weight.

Hyphenate Nouns Combined With Nouns

The hyphen indicates that the two nouns are of equal value or have common characteristics.

Examples: She is a writer-editor at CDC.
Women should consult an obstetrician-gynecologist once a year.

Hyphenate Time Periods Used as Modifiers and Numbers

Examples: The month-long investigation yielded some results.
There is a 10-day waiting period to enroll in the program.
Twenty-five people contracted the disease.

Hyphenate Fractions

Hyphenate fractions used as adjectives. However, do not hyphenate fractions used as nouns.

Examples: A two-thirds majority is needed. (*Two-thirds* is an adjective and requires hyphenation.)
Two thirds of the patients did not respond to the medication. (*Two thirds* is a noun and is not hyphenated.)

Hyphenate Compound Proper Nouns

Hyphenate compound proper nouns when they function as adjectives. However, do not hyphenate them when they function as nouns.

Examples: Pre-term birth is the leading cause of death among African-American infants. (*African-American* is an adjective.)
African Americans suffer disproportionately from chronic and preventable diseases. (*African Americans* is a noun.)

Hyphenate to Avoid Ambiguity

Hyphenate numerals, *re-* words, or any other words to avoid ambiguity. In the following examples, the presence or absence of the hyphen alters the meaning.

Examples: The 10 year-old children were vaccinated. (Ten children who are 1 year of age)
The 10-year-old children were vaccinated. (All the children who are 10 years of age)

Examples: The mathematician resolved the equation. (She found a solution.)
The mathematician re-solved the equation. (She had to do the equation again.)

Examples: He has a small bowel problem. (A small problem concerning his bowel)
He has a small-bowel problem. (A problem concerning his small bowel)

Do NOT Hyphenate Adverbs Ending in *ly*

Example: Chickenpox is a highly contagious disease.

Do NOT Hyphenate Medical Conditions, Latin and Foreign Expressions, or the Full Names of Chemical Compounds

Do not hyphenate these if they are used as adjectives.

a priori	per diem	in situ
in vivo	in vitro	hydrogen sulfide gas
sickle cell anemia	squamous cell carcinoma	ex officio*

*Hyphenate *ex-* only when it is a prefix meaning *former* (ex-director). The *ex* in *ex officio* is not hyphenated because it is Latin for *out of* or *without* and therefore not a prefix.

Do NOT Hyphenate Most Prefixes

Do not hyphenate most prefixes unless they precede a proper noun, a capitalized word, or an abbreviation (see the exceptions below).

Examples: The American Cancer Society is a nongovernment agency.
Information is also available for non-English speakers.

Examples: Subatomic physics encompasses nuclear and elementary particle physics.
Sub-Saharan Africa has more than 28 million HIV/AIDS sufferers.

Do NOT hyphenate the following prefixes. ▼

ante	anti	bi	co	contra
counter	de	extra	infra	inter
intra	micro	mid	neo	non
over	pre	post	pro	pseudo
re	semi	sub	supra	trans
tri	ultra	un	under	

Exceptions

Always hyphenate *all-*, *ex-* (when it means *former*), and *self-*.

Examples: The tobacco lobby is an all-powerful force.
The ex-surgeon general was on CNN last night.
A self-support group can help those who want to quit smoking.

Also hyphenate the prefix if the spelling would be awkward or difficult to read without it, for example if the letter ending the prefix and the one starting the word are the same (anti-infective, intra-aortic, re-enter, shell-like).

Example: Aspirin is a common anti-inflammatory drug.

Parentheses

Use parentheses sparingly, because they tend to break the reader's concentration. Use them only when you must insert background or reference information. Remember William Safire's words: "Parenthetical remarks (however relevant) are unnecessary."

Examples: Entitlement programs (e.g., Medicare, Medicaid) and the Americans with Disabilities Act are examples of national policies.

The number of older adults (those aged 65 years or older) has increased 11-fold in the past century.

Periods

When to Use Periods

Use periods with abbreviations, such as degrees (M.D., Ph.D.), states (Ala.), and titles (Mr., Dr.).

When NOT to Use Periods

Do not use periods with such words as CDC or ATSDR; these are acronyms, not abbreviations. Never end a title, heading, or subheading with a period because it slows the reading process.

Quotation Marks

With direct quotes, place periods and commas inside quotation marks; place colons, semicolons, and question marks outside of quotation marks unless they are part of the quote.

Examples: "We are working on a cure," he said.

"What are our next steps?" he asked.

Avoid using quotation marks as an apology for a word or phrase. Either omit the quotation marks or use another term.

Avoid: We used the "gold standard" method of...

Better: We used the gold standard method of...

Best: We used the most valid method of...

Semicolons

Semicolons convey separation of thought and information.

Use Semicolons to Link Independent Clauses

Use a semicolon between two independent clauses instead of a conjunction (e.g., and, or) or before a conjunctive adverb (e.g., however, therefore, thus).

Examples: The tests came back yesterday; they were inconclusive.
Tuberculosis is a serious disease; however, it is treatable.

Use Semicolons to Separate Items That Have Internal Commas

Example: In attendance were Dr. Black, EPA; Dr. Brown, CDC; Dr. White, NIH; and Dr. Green, ATSDR.

Use Semicolons to Clarify Several Individual Clauses

Example: He stopped drinking, gave up fatty foods, became a vegetarian, and took up running; but even with these changes, he still had high cholesterol.

5 Words

Mark Twain once wrote, “The difference between the right word and the almost right word is really a large matter—‘tis the same as that between lightning and the lightning bug.” Choosing the right words to express facts, thoughts, and ideas is crucial to good writing. Using a word improperly or using the wrong word dilutes the impact of our writing and can change the meaning of a sentence or a document.

The first section of this chapter, “Inclusive Language,” presents guidelines on using language to describe people in an unbiased manner. The next section, “Word Definitions,” discusses the proper use of words that are sometimes misused and provides examples of proper use. The last section, “Vocabulary Issues,” addresses vocabulary problems and mentions alternatives to redundancies and jargon.

Inclusive Language

When describing people, avoid using biased language. Following are guidelines on proper language use.

General Terminology

disability, handicap, normal, abnormal

Disability refers to a condition that limits a person’s ability to carry out a function. Avoid using *handicap*, which is a judgmental term. When comparing persons with disabilities to others, use the term *nondisabled* person or *person without disabilities* rather than *normal* person, because *normal* is associated with *abnormal*.

“Proper words in proper places make the true definition of a style.”

Jonathan Swift

Put people first, not their disability, and avoid depersonalizing terms such as *epileptic* or *diabetic*.

Avoid: disabled person, epileptic, diabetic, asthmatic

Use: person with (who has) a disability, person with epilepsy, diabetic patient, boy with asthma

gender, sex

Gender is a grammatical term that denotes whether a noun is masculine, feminine, or neutral. However, *gender* has evolved to also refer to the categories of *man* and *woman*, which are based mainly on the sex of the person. *Sex* refers to the biologic characteristics of males or females. Use *sex* and not *gender* to refer to people's sex, unless the context might cause confusion, as in this example: sex is a risk factor for HIV.

Following is a list of gender-neutral terminology. ▼

<i>Avoid</i>	<i>Use</i>
chairman, chairwoman	chair, chairperson
congressman	member of Congress, representative, legislator
fireman	firefighter
layman	layperson
mailman	mail carrier, letter carrier
man, mankind	people, humans, human beings, humanity, humankind
mothering	parenting
policeman, policewoman	police officer
postman	postal worker
repairman	maintenance worker
spokesman, spokeswoman	spokesperson

individual, person

Because the term *individual* is dehumanizing, change *individual(s)* to *person(s)* unless you need to distinguish individuals from a class or group.

Example: Both individuals and institutions participated in the test.

male, female; men, women

When distinguishing the sex of adults, use the nouns *men* and *women*; for children, use *boys* and *girls*; for adolescents, use (as appropriate) *boys* and *girls* or *young men* and

young women. Avoid using *male* and *female* as nouns unless a group contains both children and adults.

Example: The males [boys and men] were at higher risk than the females [girls and women].

people, persons

Strictly, *people* is correct for a large, indefinite group (European people) and *persons* is correct for an exact or small group (12 persons in the study). However, some critics consider that *persons* is pedantic and stodgy and that *people* is the plural of *person*.

Age

Avoid vague terms such as *school-aged children*, *teenagers*, *older women* without first defining them (i.e., infants aged 5 months to 1 year, children aged 6–12 years, adolescents aged 13–17 years, women older than 65 years).

A *youth* is one young person (usually a young boy or young man). *Youth* can refer to young people in general (the youth of the United States). In either case, it is a singular noun. Therefore, avoid constructions such as “risk behaviors among youth” (NOT *youths*) and “too many youth smoke.” Replace with *young people* or *adolescents*.

Following are AMA’s age designations. ▼

<i>Neonates or newborns</i>	birth to 1 month
<i>Infants</i>	1 month to 1 year
<i>Children</i>	1 year through 12 years. Sometimes, <i>children</i> may be used to include newborns and infants. Children may also be referred to as <i>boys</i> or <i>girls</i> .
<i>Adolescents</i>	13 years through 17 years. They may also be referred to as <i>teenagers</i> or as <i>adolescent boys</i> or <i>adolescent girls</i> , depending on the context.
<i>Adults</i>	18 years or older. Refer to them as <i>men</i> or <i>women</i> .

Race or Ethnicity

When race and ethnicity are relevant, make sure you use the correct term. Below is an explanation of different classifications of race and ethnicity. For a complete list of race and ethnicity classification, consult the Office of Management and Budget at <http://www.whitehouse.gov/omb/fedreg/ombdir15.html>.

Alaska Native (Aleuts, Eskimos, Indians of Alaska), Alaskan

An Alaska Native (NOT *Alaskan Native*) is a person whose origins are in any of the original peoples of Alaska and who maintains cultural identification through tribal affiliation or community attachment. An Alaskan is anyone who was born in Alaska or who is a long-term resident of Alaska.

American Indian or Native American

An American Indian is a person whose origins are in any of the original peoples of North, Central, or South America (except Alaska) and who maintains cultural identification through tribal affiliation or community attachment. Whenever possible, specify the nation or people (e.g., Navajo, Nez Perce, Inuit) rather than use the more general term.

Asian

An Asian is a person whose origins are in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, The Philippines, Thailand, and Vietnam. Do not use the word *oriental* (rugs are *oriental*, not people).

Black or African American

An African American is a person whose origins are in any of the black racial groups of Africa. If appropriate, specific terms such as *Haitian* or *Bahamian* may also be used. When discussing scientific data, use the term that was used when the research (the source of the data) was being conducted. Put the word *black* in lowercase letters.

Do not hyphenate *African American* as a noun; however, hyphenate it as an adjective.

Examples: In 1998, African Americans represented 48% of all reported persons with AIDS in the United States. (*African Americans* functions as a noun.)

In 1998, AIDS was diagnosed in 6,600 African-American women in the United States. (*African-American* functions as an adjective.)

Hispanic or Latino

A Hispanic is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term *Spanish origin* may also be used. Because the terms are vague, use the more specific geographic origin, if possible.

Native Hawaiian or Other Pacific Islander

A Native Hawaiian is a person whose origins are in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific islands. It does not include a person who is native to the State of Hawaii by virtue of being born there. Other terms such as *Part-*

Hawaiian may also be used when appropriate. *Note:* Capitalize *Part-Hawaiian* because it is a legal status. However do not capitalize *part* with other nationalities (example: *part-Japanese*).

White

This is a person whose origins are in any of the original peoples of Europe, the Middle East, or North Africa. Do not capitalize *white*, unless it starts a sentence. Avoid the term *Caucasian* because it technically refers to people from the Caucasus region.

Sexual Orientation

Sexual orientation should be mentioned only when scientifically relevant. Use the term *sexual orientation* and not *sexual preference*. Because they are either too vague or pejorative, avoid using *homosexual* or *gay* as nouns. Using these terms as adjectives is acceptable (homosexual man, gay man). Use *lesbians* and *gay men* when referring to specific groups.

Vague: homosexuals (the term does not specify the sex)

Clear: gay men, lesbians, bisexual persons, heterosexual persons

Word Definitions

Many words in the English language are similar in meaning or sound alike, and even the best writers occasionally have questions about their usage. Following is an alphabetical list of words that are frequently used improperly.*

abort

Abort means “to stop in the early stages.” A pregnancy, but not a fetus or a woman, may be aborted.

Incorrect: The fetus was aborted.

Correct: The pregnancy was aborted.

Better: The pregnancy was terminated.

absorption, adsorption

Absorption indicates an active, ongoing process in which something is taken up by something else by various physical actions.

Example: The absorption of spilled juice into a paper towel occurs by capillary action.

Tip: Word 2000 Shortcut

Finding the Right Word

To use the Thesaurus:

Place the cursor on the word.

Press **Shift + F7**.

* This list is adapted from *Medical English Usage and Abusage* by Edith Schwager, *The American Heritage Book of English Usage: A Practical and Authoritative Guide to Contemporary English*, and the *CBE Manual for Authors, Editors, and Publishers*. Other contributions were provided by CDC's National Center for Infectious Diseases, National Center for Environmental Health, and National Center for Chronic Disease Prevention and Health Promotion.

Adsorption describes the holding or accumulation of something, such as a gas, a liquid, or a solute (a substance that has been dissolved in another substance) on the surface of a solid or liquid.

Example: The removal of dissolved gases from tap water is achieved by their adsorption onto a substance such as activated charcoal.

acute, chronic

Use these terms to describe only the duration—not the severity—of symptoms, conditions, or diseases. Acute diseases have a sudden onset, sharp rise, and short course. Chronic diseases are marked by long duration or frequent recurrence. Avoid using these terms to describe people (e.g., avoid expressions such as chronic smokers).

Examples: CDC focuses on identifying risk factors for chronic diseases, which are illnesses that are prolonged, do not resolve spontaneously, and are rarely cured completely.

Up to 25% of injuries that require acute care in the United States are alcohol related.

ad, exam, lab

These are examples of short forms of words; they should not be used in formal writing.

affect, effect

The verb *affect* means “to produce an effect upon;” the noun *affect* is a rarely used psychology term that refers to the immediate expressions of emotion. The verb *effect* means “to bring about” or “to cause;” the noun *effect* means “a distinctive impression.”

Examples: The noise affects [does something to] my hearing.

Her affect [attitude] belied her words.

The effect [results] of the new policy will be noticeable.

The new policy will effect [produce] a new attitude among employees.

although, while

Use *while* only to connote time. Otherwise, use *although*.

Examples: He contracted the disease while traveling abroad. (*While* refers to the period of time he was abroad.)

Although we didn’t yet know the results of the first study, we set up the second study.

among, between

Use *among* with objects denoting three or more persons or things. Use *between* with objects denoting two persons or things.

Examples: There were sharp disagreements among the five panelists.
There was a sharp disagreement between the two scientists.

amount of, number of

Use *amount of* for noncountable nouns (amount of water, work, light). Use *number of* for countable nouns (number of experiments, studies, test tubes).

Examples: Even small amounts of lead exposure can result in learning and behavioral problems among children.
A review of a number of studies on the use of DES among pregnant women showed that the drug had no effect on reducing the risk of miscarriage.

and/or

Avoid using slashes instead of words; instead use *and* or *or*. In most cases use *or*, which allows for either of two options and does not preclude that both options may pertain.

Example: The women worked at the plant or lived near it.

assure, ensure, insure

Assure means “to inform confidently.” *Ensure* means “to make certain.” *Insure* means “to guarantee life or property against loss.”

Examples: The health inspectors assured the public that the water was safe to drink.
To ensure your safety, keep your seat belt fastened at all times.
We insured our new car yesterday.

to author, to write

Use *to write*.

avert, avoid

Avert means “to prevent” or “to ward off.” *Avoid* means “to keep clear of” or “to shun.”

Examples: Because he acted quickly, the danger was averted.
Because he didn’t ski, he avoided the risk of breaking a leg.

based on, on the basis of

Use *based on* only after some form of the verb *to be* or implied verb *to be*.

Incorrect: Based on these data, we can reasonably assume that smoking causes cancer.

Correct: On the basis of these data, we can reasonably assume that smoking causes cancer.

Correct: The assumption that smoking causes cancer is based on these data.

between . . . and, from . . . to, from . . . through

These expressions are not synonymous because they imply different time frames.

Between June and October covers July, August, and September; it does not include June or October. *From* June to October covers June, July, August, and September; it does not include October. *From* June through October covers June, July, August, September, and October.

biannual, biennial

Biannual means “twice a year;” it is a synonym for semiannual. *Biennial* means “every 2 years.”

Examples: During the early 1980s, biannual national vaccination campaigns substantially reduced the number of polio cases in Brazil.

The 10th Biennial Symposium on Statistical Methods was held in 2001.

The 11th symposium will be in 2003.

biopsy

Biopsy is the procedure of removing and examining tissue, cells, or fluids from the body. Do not use it as a verb. Observations are made on the biopsy specimen, not on the biopsy itself.

Example: The biopsy specimen should contain a minimum of 10 hair follicles.

case, patient

A *case* is an instance, example, or episode of disease. Do not use *case* to refer to a patient. A *patient* is a person under medical care for a disease.

Examples: The small child had a case of chickenpox.

The physician examined five patients.

caesarean delivery, caesarean section

The preferred terms are *caesarean delivery*, *caesarean birth*, or *abdominal delivery*.

Example: An elective caesarean delivery increases the risk to the infant of premature birth and respiratory distress syndrome.

cohort

A *cohort* describes a group of individuals who have a statistical factor (such as age or class) in common in a demographic study. A cohort does not refer to one individual.

Example: In his paper on asbestos-related mortality in insulation workers from 1943 to 1976, the researcher found marked increases in death due to lung cancer in this occupational cohort.

compared to, compared with

Use *compared to* to make an analogy or to compare dissimilar items. Use *compared with* when comparing items that are in some way related. In scientific writing, *compared with* is almost always correct.

Examples: The human heart can be compared to a pump (both move fluids).
The human heart can be compared with a canine heart (it has the same number of chambers but it is larger, beats at a different rate, etc.).

compendium

A *compendium* summarizes a larger work; it is NOT a comprehensive work.

Example: *The Compendium of HIV Prevention Interventions with Evidence of Effectiveness* lists the findings of CDC's HIV/AIDS Prevention Research Synthesis Project.

compose, comprise

Compose means “to be made of,” “to include,” or “to contain,” and takes the passive voice.

Example: Fuel oils are composed of many chemicals.

Comprise means “to be composed of” or “to consist of;” the whole comprises its parts, never the reverse. *Comprise* takes the active voice. Never use *to be comprised of*.

Incorrect: The United States is comprised of 50 states.

Incorrect: Fifty states comprise the United States.

Correct: The United States comprises 50 states.

concentration, level

In medical usage, *concentration* describes a quantity set within the context of another quantity. Thus, the relative content of any substance that is dissolved or dispersed within a solution or mixture is referred to as the concentration of that substance.

Example: We detected arsenic in the soil in concentrations ranging from 2.1 to 17 parts per million.

Level is usually descriptive rather than quantitative, conveying a sense of the relation a particular range of concentrations has to a standard or normal concentration of a substance.

Example: Blood lead levels of 10 g/dL or more in children are considered elevated.

congenital, heritable

Congenital conditions or characteristics are usually not part of the organism's normal genetic makeup. *Congenital* describes conditions or traits that are acquired, either at birth or during development in the uterus. Most often, *congenital* indicates that some factor, such as a drug, a chemical, an infection, or an injury, has upset the careful timing and balance of the developmental process in a way that adversely affects the fetus.

Example: A baby born with spina bifida most likely cannot pass this congenital condition on to future generations.

Heritable characteristics or conditions are intrinsic to the genetic makeup of an individual and are capable of being passed from one generation to the next.

Example: A baby born with a heritable disease, such as hemophilia, can pass the disease on to future generations.

connote, denote

Connote suggests or implies something. *Denote* means "to be explicit."

Examples: The results of the study connote that an increase in fruit and vegetable consumption leads to reduced risk for heart disease and cancer.

The symbol " $P < .05$ " denotes that the results of the study are significant and did not occur by chance alone.

contagious, infectious

Contagious refers to a disease that can be transmitted from one living being to another through direct contact (as with measles) or indirect contact (as with cholera).

Example: Chickenpox is an acute contagious disease.

The agent responsible for the contagious character of a disease is described as being *infectious*, the usual culprits being microorganisms, such as viruses and bacteria, or macroorganisms, such as fungi or parasitic worms.

Example: Louis Pasteur discovered that most infectious diseases are caused by germs.

contraception, contraceptive

Contraception is the practice of preventing pregnancy. *Contraceptive* is the method used for contraception.

Examples: Popular methods of contraception include birth control pills and condoms.
The pill is the leading contraceptive method among women under age 30.

contract, develop

Patients do not *develop* diseases; they *contract* diseases. Diseases develop in patients.

Incorrect: The patient developed brucellosis after ingesting contaminated milk.

Correct: The patient contracted brucellosis after ingesting contaminated milk.

critical patient

Patients are not *critical*, but their status or condition is.

Incorrect: The patient was critical.

Correct: The patient was in critical condition.

diagnose

Conditions, diseases, and disorders are *diagnosed*, not patients.

Incorrect: The child was diagnosed with rubella.

Correct: The physician diagnosed rubella.

die of, die from, die with

People die *of*, not *from*, a condition or disease. People can also die *with* a disease that is not the immediate cause of death.

Example: The elderly man died of injuries sustained in a car crash and with Alzheimer disease.

doctor, physician

Doctor is a title applying to those who hold advanced degrees (e.g., Ph.D., D.D.S., D.V.M.).

Physician refers to a doctor of medicine. Do not use the title and the degree together.

Incorrect: Dr. Stephen Jay Gould, Ph.D.

Correct: Dr. Stephen Jay Gould

Correct: Stephen Jay Gould, Ph.D.

dose, dosage

Dose means “the amount to be taken at one time.” *Dosage* means “the amount (doses) to be taken over a period of time.”

Examples: Give the vaccine over a period of time, in a series of properly spaced doses.
New drugs are usually introduced in low dosages and gradually increased over time.

due to, because of

Use *due to* only after some form of the verb *to be* or implied verb *to be*. Never begin a sentence with *due to*. If *due to* could be replaced with *caused by*, it is correct.

Incorrect: He succeeded due to his hard work and great talent. (*Caused by* cannot be substituted, therefore *due to* is incorrect.)

Correct: His success was due to hard work and great talent. (*Due to* is correct because you can substitute *caused by*.)

e.g., etc., i.e.

Use *e.g.*, (*exempli gratia*: for example), *etc.*, (*et cetera*: and others), and *i.e.*, (*id est*: that is) with care; they have different meanings.

The abbreviation *e.g.*, is followed by an example or an incomplete list of examples.

Example: Certain behaviors are harmful (e.g., smoking, drinking, overeating).

The abbreviation *i.e.*, does not introduce an example; it indicates that what follows is an explanation or clarification of what has just been said. If a complete list follows, insert a conjunction before the final item in the list.

Example: We studied three harmful behaviors (i.e., smoking, drinking, and overeating).

Use *etc.*, with discretion, and never after an example or list of examples. Because a list of examples implies that not every item is included, *etc.* is redundant.

Incorrect: To be successful, investigators need certain characteristics (e.g., leadership ability, curiosity, tenacity, etc.).

Correct: To be successful, investigators need certain characteristics (e.g., leadership ability, curiosity, tenacity).

Use *e.g.*, and *i.e.*, only within parentheses. Otherwise spell out *for example* and *that is*.

Example: We studied several types of behaviors; for example, we studied teenagers' tendency toward risky behavior.

e-mail

Use *e-mail* rather than *email* or *E-mail*.

endemic, epidemic, pandemic

Endemic describes a disease (or characteristic) that is restricted to a particular region, such as cholera and plague in parts of Asia. A disease is endemic in an area; the area is not endemic. *Epidemic* refers to a disease that involves many more people than usual in a

particular community or a disease that spreads into regions in which it does not normally occur. *Pandemic* is the outbreak of a disease occurring over a wide geographic area and affecting a large number of people.

Examples: Cholera is endemic on the Indian subcontinent and in Sub-Saharan Africa.
Occurrences of influenza often result in epidemics.
HIV/AIDS is pandemic in Africa.

enhance

Enhance means “to heighten” or “to increase,” especially to improve in value, quality, desirability, or attractiveness. Avoid using *enhance* to indicate an increase in an undesirable outcome. *Enhance* could be replaced with *improve*, *heighten*, *increase*, *elevate*, *enlarge*, or *augment*.

Avoid: Smoking enhances the risk for lung cancer.

Use: Smoking increases the risk for lung cancer.

etiology, cause

Etiology is the study or description of causes or origins of a disease, not the immediate *cause* of a disease.

Examples: The etiology of cancer is a maze of unknowns.
The cause of heart failure was acute myocardial infarction.

exercise, physical activity

Exercise is planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness. *Physical activity* is any bodily movement produced by skeletal muscles that results in energy expenditure.

Examples: These exercises can be done while sitting at your desk.
Even moderate physical activity, such as walking, can result in health benefits.

farther, further, furthermore

Use *farther* only in relation to distance. *Further* can be used for any greater degree, greater extent, or greater distance. *Furthermore* means “in addition to what has just been said.” Avoid using *further* for *furthermore*.

Examples: With the increasing level of noise in urban areas, many families are moving farther away from cities.
The center calls for further research on ways to minimize risk of hearing loss in the workplace.
Furthermore, additional recommendations for preventing hearing loss should be included in the report.

fever, temperature

Fever is a rise in body temperature above normal. A person's *temperature* is either normal or abnormal. Everyone has a temperature. Do not use *temperature* if *fever* is intended.

Example: If the patient has a temperature of 37.8°C, he has a fever of 0.8°C.

fewer, less

Use *fewer* with countable units and *less* with noncountable units.

Example: We collected fewer blood samples for this study, and we collected less blood from each person.

follow, follow up, follow-up, followup

Follow and *follow up* (two words) are verbs; *follow-up* (hyphenated) is an adjective; *followup* (one word) is a noun. Cases (instances of disease) and clinical courses may be followed. Patients or study subjects are not followed; they are observed. One can follow up on either cases or patients.

Examples: They must follow strict research protocols. (Verb)

The clinician followed up with her patients. (Verb)

Followup occurs 24 hours after the drug is administered. (Noun)

CDC conducted a follow-up study on the effects of pollutants in the environment. (Adjective)

germ, microbe, microorganism, pathogen

Germ and *microbe* are nontechnical terms describing a living organism, especially one invisible to the naked eye, that can cause diseases. The technical term is *pathogen*, which describes an agent that causes diseases, especially a bacterium, fungus, or other microorganism.

Examples: Disinfect areas where there are both high concentrations of dangerous germs and a possibility that they could spread to others.

Drug resistance occurs when microbes develop ways to survive medicines meant to kill or weaken them.

The pathogens under surveillance in FoodNet include *E. coli* and *Salmonella*.

Microorganism is a general term that describes all one-celled microscopic organisms, both disease-causing and benign.

Example: Many microorganisms, such as *typhoid bacillus*, are adapted exclusively to humans.

good, well

The adjective *good* and the adverb *well* are not interchangeable. *Good* means “something that is as it should be;” it qualifies a noun (good data). *Well* means “satisfactorily;” it qualifies a verb (to eat well).

Examples: The study produced good results. (*Good* qualifies the noun *results*.)
The study went well. (*Well* qualifies the verb *to go*.)

-ic, -ical

Omit the *al* when it is unnecessary (e.g., use *epidemiologic* rather than *epidemiological*, *biologic* rather than *biological*). However, the meaning of some words changes depending on the ending. For example, *historic* refers to something that is famous in history, whereas *historical* refers to something that is about history or based on history.

Examples: Thomas Jefferson is featured in many historical novels.
Thomas Jefferson participated in many historic events.

immunize, vaccinate

To immunize means “to confer immunity.” To vaccinate means “to administer a vaccine.”

Example: People who were vaccinated against smallpox may no longer be immunized against the disease.

incidence, prevalence

Incidence refers to the rate of occurrence, such as the number of new cases of a disease occurring at a certain time. *Prevalence* is the total number of cases (or percentage) of a disease existing at a certain time in a certain area. *Incidence* expresses the number of new cases, whereas *prevalence* expresses the total number of cases.

Examples: The highest incidence of acute hepatitis C (HCV) is found among persons aged 20 to 39 years.
The highest prevalence of HCV infection is found among persons aged 30 to 49 years.

include

Include (and *includes, included, including*) precedes an incomplete list only.

Incorrect: The United States includes 50 states.

Correct: The United States includes Alaska and Hawaii.

infer, imply

Infer means “to draw a conclusion from evidence.” *Imply* means “to suggest without actually stating.” Usually the speaker or writer implies, and the listener or reader infers.

Examples: We can infer from this study that PCBs cause cancer in animals.
The latest study implies that PCBs also cause cancer in humans.

inject, inoculate

Medications, preparations, and drugs are *injected*, not patients or animals.

Incorrect: The physician injected the patient with insulin.

Correct: The physician injected insulin into the patient.

You *inoculate* an animal or patient with something.

Example: We inoculated each mouse with 0.5-mL aliquot.

Internet

Capitalize *Internet*.

lay, lie

To lay means “to place;” *laid* is the past tense. *To lie* means “to be in a reclining position;” its past tense is *lay*. *To lie* can also mean “to make an untrue statement;” its past tense is *lied*.

Examples: I asked him to lay the folder on my desk. He laid the folder on my desk yesterday.

He is depressed and lies in bed all day. He lay in bed yesterday.

You can’t believe him; he lies all the time. He lied yesterday.

may, might

Both indicate possibility or probability. Strictly, *may* is present tense, *might* is past tense.

Examples: He believes he may be ill.

He believed he might have been ill.

Often *may* and *might* are used interchangeably, with *may* indicating more certainty than *might*.

Example: The study may answer some questions and might answer all of them.

Might rather than *may* is correct in hypothetical situations.

Example: Had they known the results, the members might have concluded differently. (NOT *may*)

maximize, maximal, minimize, minimal

Maximize means “to increase to the greatest amount possible,” not simply “to increase.”

Maximal means “the upper limit,” “the most comprehensive,” not “somewhat more” or “much more.”

Examples: CDC has guidelines on how to freeze food to maximize safety and freshness.

The maximal retention calcium intake for adolescents is 1,300 mg/d.

Minimize means “to decrease to the least amount possible,” not simply “to decrease.”

Minimal means “the least possible,” not “somewhat less” or “a lot less.”

Examples: To minimize your exposure to farm pesticides, wear appropriate protective gear.

The cost of tracking our progress will be minimal.

methodology

Methodology is the study of methods or a body of methods, rules, and postulates.

Otherwise, use *method(s)*.

Example: After completing a course on audience research methodology, we decided to use qualitative research methods, including focus groups and interviews, to develop messages for CDC’s folic acid campaign.

molecular weight

Molecular weight means “the relative mass of a substance.” It is a pure number and has no units.

Incorrect: The molecular weight of the protein is 30,000 daltons.

Correct: The molecular mass of the protein is 30,000 daltons.

Correct: The molecular weight of methane is 16.

morbidity

Morbidity means both “the relative incidence of disease” and “the condition of being diseased.” Change *morbidity* to *illness*, *disease*, or *condition* when writing for lay audiences.

Example: Millions of people suffer from illnesses that can be prevented or improved through regular physical activity. For example, the morbidity rate for heart disease is 135 per 100,000 Americans.

mortality, mortality rate, fatality

Mortality means “the number of deaths per standard unit of population per unit of time.” Change *mortality* to *death* for lay audiences. *Mortality rate* means “the number of deaths per number of persons at risk,” as in infant mortality rate (the ratio of numbers of infant deaths during a calendar year to the total number of live births during that year). Distinguish *mortality* from *fatality*. *Fatality* is a death resulting from a disaster.

Examples: Breast cancer mortality rates declined significantly during 1992–1998.
One of the fatalities in the accident was a small child.

N, n

N (uppercase) refers to the number of subjects in an entire study. *n* (lowercase) refers to the number of subjects in a subgroup within a study.

Examples: The Keokuk County Rural Health Study is a large, prospective and comprehensive study of households in Keokuk County, Iowa (*N* = 1,000). We used responses of female controls (*n* = 475) from the population-based Cancer and Steroid Hormone Study.

nation

Because CDC publications often have an international readership, avoid using *nation* or *this country* as a synonym for the *United States*.

Avoid: This nation has a vast public health network.

Use: The United States has a vast public health network.

negative, normal, abnormal

These terms apply to the results of laboratory tests or medical examinations, not to tests or examinations themselves.

Incorrect: The throat culture was negative. The patient's blood test was abnormal.

Correct: The culture was negative for streptococci. Results of the blood test showed abnormal levels of iron.

normal, abnormal x-rays

The results of x-rays are *normal* or *abnormal*, not the x-rays themselves.

Incorrect: The x-ray is abnormal.

Correct: The results of the x-ray are abnormal.

-ology

-ology is a suffix that means “science of” or “study of.” Use terms ending in *-ology* only to refer to the discipline or function and not to the subject of the discipline. Avoid, for example, using *pathology* to mean *pathologic tests* or *serology* to mean *serologic tests*.

Incorrect: The pathology should help us understand the virus's make-up.

Correct: The pathologic test should help us understand the virus's make-up.

over, under

These terms can be ambiguous when referring to time spans, ages, or quantities. Do not use *over* and *under* with time spans. Depending on your meaning, use *for* or *for*

more than instead of *over*; use *less than* instead of *under*.

Ambiguous: They studied the group over 10 years. (Does this mean *for 10 years* OR *for more than 10 years*?)

Clear: They studied the group for 10 years.

Clear: They studied the group for more than 10 years.

When referring to age groups, replace *over* and *under* with the more precise *older than* and *younger than*.

Avoid: All of the participants were over 65 years of age.

Use: All of the participants were older than 65 years of age.

When referring to numbers of persons, things, or groups, replace *over* and *under* with *more than* and *fewer than* or *less than*, whichever is appropriate.

Avoid: Over 2,000 people attended the conference.

Use: More than 2,000 people attended the conference.

Pap smear, Pap test

Change *Pap smear* to *Papanicolaou test*. If the term is repeated, write it out in full the first time, put the abbreviation *Pap test* in parentheses, and use the abbreviation from then on.

Example: A Papanicolaou test (Pap test) is an invaluable tool in the fight against ovarian and vaginal cancer. Every woman should get a Pap test annually.

parameter

This term is often misused. The word has a specific statistical meaning and should not be used to mean measurement, value, or number. Except when a descriptive quantity for a statistical population is meant, change *parameter* to *measurement*, *value*, *quantity*, *variable*, or *number*.

Example: Sites along the Mississippi River were not included in the analysis because they were outside the parameters of the study.

pathology

Pathology is the study and description of disease processes, abnormalities, and lesions; do not use it in place of *abnormalities* or *lesions*.

Example: CDC is sponsoring a workshop on the pathology and emergence of infectious diseases.

percent, percentage

Use *percent* only with numbers. Use *percentage* with nouns.

Examples: Thirty five percent of high school students always wear their seat belts.
A large percentage of the population is allergic to poison ivy.

Note: In graphs that give percentages, the label on the axis should read *percent*, not *percentage*.

person

The plural of *person* is *persons*, not *people*. *People* refers to a group of persons who share particular characteristics (the American people).

Example: The chronic disease prevention guidelines apply to all persons, not just people from the United States.

positive test results

Be sure to say what you mean because it could be bad news, not good news.

Example: A positive reaction to the TB skin test usually indicates latent TB infection.

preventative, preventive

Use *preventive*.

principal, principle

The adjective *principal* means “most important,” or “most influential.” The noun *principal* refers to a person who has controlling authority or is in a leading position. The noun *principle* refers to a basic belief, law or doctrine, or to an assumption.

Examples: The principal cause of mesothelioma, a rare lung cancer, is exposure to asbestos. (*Principal* is an adjective.)
The principal is new to this school. (*Principal* is a noun.)
Stick to your principles. (*Principle* means beliefs.)
The acceleration principle is a theory in economics. (*Principle* means a law.)

regime, regimen, regiment

A *regime* is a form of government. A *regimen* is a plan to improve and maintain good health. A *regiment* is a military unit.

Examples: The *ancien régime* refers to the political and social system of France before 1789.
Treatment of diabetes requires a strict regimen that includes a carefully

calculated diet, physical activity, blood glucose testing, and multiple daily insulin injections.

The 65th Infantry Regiment began as a volunteer unit in 1899.

relation, relationship

A *relation* is an association between two or more items. Reserve the term *relationship* to describe a state of affairs among people related to or dealing with one another.

Examples: Numerous studies have established the relation between lung cancer and exposure to asbestos.

The two health communicators have a good working relationship.

research subjects, control subjects, study participants

Research subjects have the particular characteristic, engage in the particular behavior, or are exposed to the particular variable (e.g., a certain drug) under study. Research subjects are recruited, selected, sometimes subjected to experimental conditions, and observed.

Control subjects are as similar as possible to research subjects except that they do not have the particular characteristic under study. Control subjects are recruited, selected, sometimes exposed to a placebo, and observed.

Study participants can be either the research or the control subjects.

respectively

Avoid using *respectively* to connect components in a sentence; this construction forces readers to pause and puzzle over which components go together.

Avoid: The smoking rates for boys, girls, men, and women were 18, 15, 27, and 26%, respectively.

Use: The smoking rates were 18% for boys, 15% for girls, 27% for men, and 26% for women.

sacrifice

Sacrifice is a euphemism for killing laboratory animals. Use *kill* or *humanely kill*.

serum samples

Because serum does not occur in discrete units, a person cannot have more than one; that is, a patient has serum, not sera, just as one has blood, not bloods. Discrete

quantities of serum can be collected; refer to these as *serum*, *serum samples*, or *serum specimens* rather than *sera*.

Example: He collected serum samples from hospital staff at risk for hepatitis B.

significant

Because *significant* has a specific statistical meaning, it should not be used as a synonym for *important*. In a nonstatistical context, use another word such as *important*, *substantial*, *notable*, *major*, or *great*. When statistical significance is meant, *P* values are usually given.

Example: The mean blood pressure was significantly lowered, with a *P* value of .05.

since, because

To avoid ambiguities, use *since* with time frames only (e.g., since 1960), not as a synonym of *because*.

Ambiguous: Since they researched that topic, they found out more about it. (Does it mean, *Because they researched the topic?* OR *Since the time when they researched that topic?*)

t test

The *t* is lowercase and italicized.

Example: A paired *t*-test was used to compare pre-and post-training scores of immigrant and U.S.-born Asians.

toxic, toxicity, toxin, toxicant

Toxic means “pertaining to or caused by a poison or toxin.” *Toxicity* means “the quality, state, or degree of being poisonous.” *Toxins* are natural poisons (e.g., snake venom).

Toxicants are manufactured poisons (e.g., chemical pesticides).

Examples: All explosives generate toxic fumes when they detonate.

They investigated the extent of exposure and toxicity among users of a skin lotion containing mercury.

When botulinum spores grow in contaminated foods or inside the digestive tract of a young child, they can produce a toxin that causes botulism.

A number of toxicants, such as lead and arsenic, were present in the soil.

United States, U.S.

Use *United States* as a noun. Use *U.S.* as an adjective.

Examples: In 1999, 46.5 million adults in the United States smoked cigarettes.

In 1999, 46.5 million U.S. adults smoked cigarettes.

use, utilize, usage

The verb *to use* is always preferred. In general, the short form of a word is preferred over the long form.

versus, vs., v

Both *vs.* and *v* are abbreviations for *versus*, which means “in contrast to.” Use *v* (without a period) only in legal citations and italicize the citation (*Brown v Board of Education*).

Avoid using *versus* in comparisons.

Avoid: The women’s response rate (82%) was high versus the men’s response rate (34%).

Use: The women’s response rate (82%) was much higher than the men’s response rate (34%).

vicious circle, vicious cycle

Vicious circle is the correct term, not *vicious cycle*.

Website, World Wide Web, the Web

A website is a particular location on the World Wide Web. *World Wide Web* is synonymous with the *Web*. However, capitalize *World Wide Web* and the *Web*.

Tip: Word Use

Strunk's Advice on Word Use

- Prefer the familiar word to the 'hifalutin.
- Prefer the single word to the circumlocution.
- Prefer the short word to the long.
- Prefer the standard to the offbeat.
- Prefer the specific to the general.
- Prefer the definite to the vague.
- Prefer the concrete to the abstract.

Vocabulary Issues

Buzz Words (Fillers)

You can often omit these words without changing the meaning of the sentence. Leaving them out will make the sentence clearer. Follow Mark Twain's advice: "As to the adjective, when in doubt, strike it out."

Following is a list of fillers to avoid. ▼

a total of	absolutely	actually
as a matter of fact	basically	completely
current	definitely	each and every one of
existing	extremely	fine
for all intents and purposes	good	great
I believe that	important	in due course
in the end	it is important that	it should be noted
I would like to point out	I would like to say	I would like to stress
last but not least	major	obviously
of course	quite	really
significant	the fact of the matter is that	the month of
very		

Incomparables

Incomparables such as *perfect* are absolute and therefore cannot be qualified or modified. You can say *almost* or *nearly perfect* but not *more perfect*.

Tip: Top 10 Jargon Words

Jargon	Alternative
as well as	and, also
currently	now
emphasize	stress
in addition to	and, also
in order to	to
in the vicinity of	near
large number of	many (or say how many)
the majority of	most
utilize	use

Following is a list of incomparables. ▼

absolute	best	complete	equal
eternal	fatal	final	least
lethal	perfect	square	supreme
terminal	total	unanimous	worse

Jargon

Simple, plain English words are always preferable to complicated ones. As Francis de Sales said, “There is no artifice as good and desirable as simplicity.”

Following is a list of jargon words and their alternatives. ▼

<i>Avoid</i>	<i>Prefer</i>	<i>Avoid</i>	<i>Prefer</i>
A		B	
a considerable amount	much	by means of	by
a considerable number	many		
accomplish	do, achieve	C	
accordingly	so	close proximity	near
accumulate	gather	commence	begin, start
acquire	get	completion	end
activate	begin, start	comply with	follow, obey
adequate number of	enough	components	parts
adjacent to	next to, near	conceal	hide
advantageous	useful, helpful	concerning	about
afford the opportunity	allow	construct	build
allocate	give	contrary to	against
along the lines of	like, as in	cumulative	added
ameliorate	improve	currently	now
an estimated	about	customary	usual
as a consequence of	because		
as a result of the fact that	because	D	
as long as	if, since	depict	show
as regards	about	demonstrate	show, prove
as well as	and, also	desist	stop
at all times	always	despite the fact that	although, though
at an early date	soon (or say when)	detrimental	harmful
at the moment	now	disconnect	cut off, unplug
at the present time	now	disseminate	send, distribute, spread
at the time that	when	due to the fact that	because
attain	reach	duplicate	copy
augment	increase	during the course of	during
		during the time that	while
		during which time	while

		<i>Avoid</i>	<i>Prefer</i>
<i>Avoid</i>		<i>Avoid</i>	
E		I	
effect (v)	make	illustrate	show
effectuate	bring about, carry out	impact (v)	affect, influence
elucidate	explain	implement	carry out, do
employ	use	in almost all instances	nearly always
endeavor to	try	in a number of cases	in some cases (or say how many)
enquire	ask	in a timely manner	promptly, soon
ensuing	following	in addition to	and, also
equivalent	equal	in advance	before
evaluate	test	in case of	if
except when	unless	in conjunction with	and, with
		in most cases	often, mostly
F		in order to	to
facilitate	make easier, ease, help	in reference to	about
facility	building, laboratory, office	in spite of the fact that	despite
		in terms of	about
feasible	possible	in the absence of	without
feedback	comments, response	in the amount of	for
finalize	complete, conclude, finish	in the context of	in
following	after	in the course of	during, while
for the duration of	during, while	in the event of	if
for the purpose of	for	in the near future	soon
for the reason that	because	in the neighborhood of	about, around
formulate	work out, devise	in the vicinity of	near
frequently	often	is in a position to	can
functionality	function	it is clear that	clearly
fundamental	basic	it is incumbent upon us	we must
		in view of the fact	as, because
G		it would appear that	apparently
give rise to	cause	it is probable that	probably
		inception	start
		initial	first
		input	comment
		inquire	ask
		institute (v)	begin, set up, start

<i>Avoid</i>	<i>Prefer</i>	<i>Avoid</i>	<i>Prefer</i>
L		P	
large number of	many (or say how many)	paradigm	pattern, example
linkage	link	parameter	boundary, limit, extent
listing	list	partially	partly
location, locality	place	permit	let
		pertaining to	about
M		place (v)	put
magnitude	size	portion	part
manner	way	predominant	main
manufacture	make	preparatory to	before
materialize	occur, happen, appear	presently	soon, shortly
methodology	methods, procedure	previous to	before
mitigate	moderate, ease, soften, relieve, reduce	prioritize	rank
moreover	besides, also, and	procure	get, obtain
		prolonged	long
N		provided that	if
necessitate	require, need	purchase	buy
nevertheless	but, however	R	
not in a position to	unable	regarding	about, on
O		regulation	rule
objective	aim, goal	remainder	rest
observe	see	represents	is
obtain	get	request (v)	ask
on a regular basis	regularly	require	need
on behalf of	for	reside	live, stay
on numerous occasions	often	residence	home, house
on the condition that	if	retain	keep
on the grounds that	because	S	
on the occasion that	when, if	solely	only
on the part of	by	state (v)	say
operate	use	statutory	legal, by law
operational	working, active, running	strategize	plan
otherwise	or	subsequently	later
output	product	subsequent	next
		subsequent to	after

<i>Avoid</i>	<i>Prefer</i>	<i>Avoid</i>	<i>Prefer</i>
substantial	big	unoccupied	empty
substantiate	prove	until such time	until
sufficient	enough	upon	on
		utilization	use
T		utilize	use
take into consideration	consider		
terminate	end, finish, stop	V	
the majority of	most	viable	possible
thereafter	then	virtually	almost
through the use of	by, with	visualize	see
transmit	send		
transpire	happen, occur, take place	W	
		with regards to	about
U			
ultimate	last, final		
uniform	same, similar		

Tautologies and Redundancies

A tautology is a needless repetition of a word, idea, or statement, such as in “Five minutes before he died, he was still alive.” Although this is an extreme example that might never be used, we use many other tautologies without even realizing it. As Thomas Jefferson said, “The most valuable of talents is that of never using two words when one will do.” Below is a list of common tautologies and their alternatives. ▼

<i>Superfluous</i>	<i>Correct</i>	<i>Superfluous</i>	<i>Correct</i>
A			
absolutely complete	complete	cooperate together	cooperate
absolutely essential	essential	costs a total of	costs
actual/past/present experience	experience	current status	status
added bonus	bonus		
advance planning/notice	planning/notice	D	
already exist	exist		
and also	and, also	doctorate degree	doctorate
	(but not both)		
ask the question	ask	E	
assembled together	assembled		
at about	at, about	each and every	each, every
	(but not both)		(but not both)
		end result	result
		exactly identical	identical
		extremely minimal	minimal
B			
basic fundamental	basic, fundamental	F	
	(but not both)		
cancel out	cancel		
C			
CD-ROM disk	CD-ROM	few in number	few
center around	center	filled to capacity	filled
clearly evident	evident	final outcome	outcome
blue/red/yellow in color	blue/red/yellow	first and foremost	first
completely destroyed	destroyed	foreign imports	imports
complete monopoly	monopoly	future plans	plans
consensus of opinion	consensus		
contributing factor	factor	G-H	
controversial issue	issue		
		general public	public
		HIV virus	HIV
		I	
		if and when	if, when
			(but not both)

<i>Superfluous</i>	<i>Correct</i>	<i>Superfluous</i>	<i>Correct</i>
it is clear	(omit)	R	
it is obvious	(omit)	repeat again	repeat
J-L		S	
join together	join	small in size	small
large in size	large	square in shape	square
		still remains	remains
M		sum total	total
mixed together	mixed		
month of January	January	T	
more and more often	often	temporary loan	loan
		time period	time, period (but not both)
N		total number	total
new breakthrough	breakthrough	true fact	fact
none at all	none	12 noon/12 midnight	noon, midnight
O		U	
over and over again	repeatedly	unite together	unite
overexaggerate	exaggerate	usual habit	habit
P		V	
past history/experience	history/experience	visible to the eye	visible
period of time	period, time (but not both)		
point in time	now, today		
postpone until later	postpone		

Words Commonly Misspelled

English spelling can be difficult and illogical. Remember George Bernard Shaw's explanation of why *ghoti* is pronounced *fish*: *gh* as in rough, *o* as in women, *ti* as in fiction. The following pages contain a list of commonly misspelled words. ▼

Tip: Word 2000 Shortcut

Spell Check

To check spelling and grammar click **F7**.

<i>Incorrect</i>	<i>Correct</i>	<i>Incorrect</i>	<i>Correct</i>
A			
accomodate, accomodate	accommodate	excede	exceed
acumulate	accumulate	existance	existence
agressive	aggressive	eye witness	eyewitness
alright	all right		
amuck	amok	F	
auxilliary	auxiliary	ficticious	fictitious
		flurescent	fluorescent
B		fluride	fluoride
bacallaureate	baccalaureate	forword	foreword
barbituates	barbiturates	fullfill	fulfill
C		G	
catherization	catheterization	gassify	gasify
changable	changeable		
committment, comitment	commitment	H	
concensus	consensus	harrass	harass
correspondance	correspondence	heigth	height
		hemorhage, hemorrhage	hemorrhage
D		hemmoroid	hemorrhoid
day-long	daylong		
dependant (adjective)	dependent	I	
diarhea	diarrhea	indispensible	indispensable
dietician	dietitian	innoculate	inoculate
dilemna	dilemma	interferred	interfered
dispell	dispel	irrelevant	irrelevant
disatisfied	dissatisfied		
		L	
E		length	length
elegible	eligible	likelyhood	likelihood
embarass	embarrass	liquify	liquefy
exagerate	exaggerate		

<i>Incorrect</i>	<i>Correct</i>	<i>Incorrect</i>	<i>Correct</i>
M managable manouver mispell	manageable maneuver misspell	predominately prefered procede	predominantly preferred proceed
N nation-wide nighttime	nationwide nighttime	R reccur relevent rythm	recur relevant rhythm
O ocasion, occassion occurence, occurance ophtalmology	occasion occurrence ophthalmology	S skilful, skillfull supercede	skillful supersede
P paralel, parallell personel preceed precedant	parallel personnel precede precedent	T threshhold U-W untill withold	threshold until withhold

6 Tables, Charts, and Graphs*

This chapter presents the different types of data graphics or visuals (i.e., tables, charts, and graphs) and explains which are best suited for the information you need to convey. A visual can convey ideas in a way words cannot and visuals are often the most effective way to display large sets of numbers or data. An effective visual combines simplicity of design and complexity of data.

Above All Else, Show the Data

A visual should focus on the data, not on the visual itself. Visuals that are too decorative distract from the main message, which is to convey data at a glance. Instead of a clean visual, you end up with “chartjunk.”

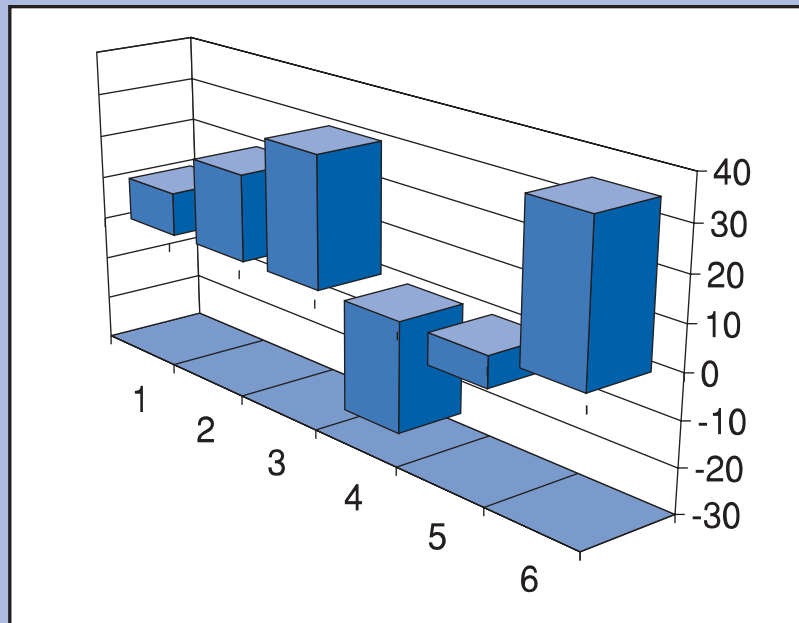
Avoid “Chartjunk”

One simple way to avoid “chartjunk” is to eliminate or reduce the clutter around a visual, such as explicit grids around a table (unnecessary), extra borders (useless), heavy lines (cumbersome), two- or three-dimensional effects (deceptive), or color (distracting). This type of visual surplus is noninformation that should be eliminated through careful editing.

You can observe
a lot by just watching.

Yogi Berra

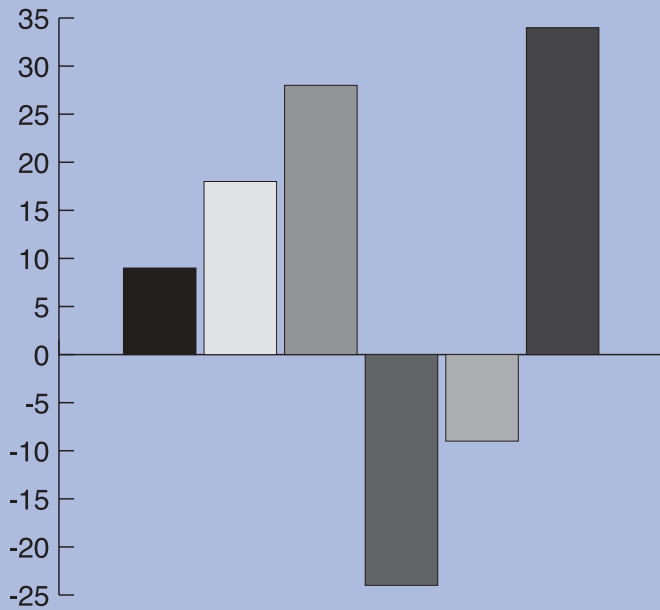
Example: “Chartjunk”



This computer chart violates many design theories. It is enclosed in a box, has a grid, has too many vertical and horizontal lines, and is three-dimensional in perspective. The effect is too busy, and the information is difficult to read.

* A version of this chapter originally appeared in ATSDR's *VIC Style Guide*.

Example: Redesigned Chart



Because all the “chartjunk” has been eliminated, the effect is much more sober, and the chart is actually readable.

The Elements of a Visual

Effective visuals convey complex ideas with simplicity, clarity, and efficiency. To succeed, visuals should

- Show the data.
- Focus the reader’s attention on the meaning of the data (content), not on the graphic design itself (format).
- Avoid distorting the data.
- Present a lot of information in a small space.
- Encourage comparisons of the different data.
- Serve a clear purpose (compare, contrast, describe, explore).
- Be accompanied by and closely related to the text.

Guidelines for Enhancing Visuals

To be attractive and effective, the visual should

- Have the proper format and design (e.g., table, pie chart).
- Have a balanced look and a relevant scale (do not create a visual for a small amount of data).
- Be technically and scientifically accurate.
- Avoid decorations and “chartjunk.”

Tables

Definition

Tables are numerical values displayed in rows and columns. They are useful for showing a large number of data in a small space, either with numbers or words. The purpose of a table is to present data or information and to support statements in the text. A table should stand independently, without any explanations from the text.

The Six Elements of a Table

A table typically contains six major elements:

- 1 **Number and title.** Each table needs a number and a title that succinctly describes what the table represents. The title for each table should be unique, brief, and informative. The title should be in bold to stand out and should not be followed by a period.
- 2 **Column headings.** Each column should have a heading that contains the main categories of information and identifies the entries in the columns. Headings should be brief and descriptive. Units of measure, where necessary, should be either specified as part of the heading or enclosed in parentheses under the heading. Column headings are usually in bold.
- 3 **Row headings (or data stubs).** The left-hand vertical column carries a column heading and lists the items about which information is given in the table.
- 4 **Body (or data field).** The body consists of individual cells (data points) and contains the information or data the author wants to present. These data can be numbers, text, or symbols.
- 5 **Rules (or lines).** Rules separate the table into its various parts. A common mistake in designing tables is to enclose the information in a grid. Instead of guiding the reader's eye through the data, the striped texture of a grid actually fights with the information. Tables look better if they are not closed on all sides.

6 **Source and footnotes.** The source line identifies the origin of the data. When a source line is needed, it appears below the table and the footnotes. Footnotes explain individual items in the table and minimize the visual clutter of a table. Following are a few guidelines and tips on how to use footnotes properly.

Tip: Word 2000 Shortcut

Inserting Footnote Symbols

Place the cursor where you want to insert the symbol.

1. On your toolbar, click **Insert, Symbol** to open the **Symbols** window.
2. Select the **Symbols** tab. Under **Font** select **(normal text)** and under **Subset** choose **Basic Latin**.
3. Scroll down until you find the appropriate symbol.
4. Highlight the symbol and click **Insert**.
5. Click **Close** to close the window.

Tip: Word 2000 Shortcut

Superscripting Symbols

Highlight the symbol, letter, or number you want to superscript.

1. On your toolbar, click **Format, Font** to open the **Font** window.
2. Select the **Font** tab, select **Superscript**.
3. Click **OK**.

General Guidelines for Using Footnotes

- Use abbreviations in the table, and define them in footnotes.
- List the footnotes in the order in which they appear in the table. Go across rows from left to right, not across columns from top to bottom.
- If a footnote applies to the entire table, put the footnote symbol after the title.
- If a footnote applies to an entire column or row, place the footnote symbol after the column or row heading.

Using Footnote Symbols

For 10 footnotes or less, use the following superscript symbols in order:

- * Asterisk
- † Dagger
- ‡ Double dagger
- § Section mark
- ¶ Paragraph mark

For footnotes 6 through 10, double the symbols.

For more than 10 footnotes, use superscript lowercase letters (e.g., 152^a, 240^b) instead of numbers because numbers could be mistaken for the numerical data within the table.

Example: Table

***Indoor Air Results in Classroom, Offices, and Hallways—
Webster Middle School, Milwaukee, Wisconsin, July 10, 2000***

Chemical	Lowest Level Detected	Highest Level Detected	Frequency of Detection	Comparison Value	Outdoor Air Levels in Milwaukee 1996–1998
Petroleum-Based VOCs*					
Toluene	11†	21	5 in 6	420.0‡	0.6–10.6
Total xylenes	7.9	24.5	5 in 6	100.0§	0.7–6.5
Chlorinated VOCs					
Chloroform	ND¶	ND	0 in 6	NA	ND
cis-1,2-dichloroethylene	0.8	8.1	6 in 6	303.3‡	NA
Trans-1,2-dichloroethylene	ND	1.3	1 in 6	597.0‡	NA
1,1-dichloroethylene	ND	ND	0 in 6	0.02**	NA
Methylene chloride	1.0	5.8	6 in 6	3.8**	0.4–1.3
Vinyl chloride	ND	ND	5 in 9	0.1**	ND

* VOCs: Volatile organic compounds.

† All concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

‡ EPA's reference dose.

§ ATSDR's chronic environmental media evaluation guide.

ND: Not detected.

** Cancer risk evaluation guide for 1 in 1,000,000 excess lifetime cancer risk.

Source: Chemex Laboratories, Milwaukee, Wisconsin, 1998.

Charts and Graphs

Definition

Charts and graphs represent numerical data in visual form. They show trends, movements, distributions, comparisons, and cycles. The following sections present common types of charts and graphs.

Example: Bar Chart

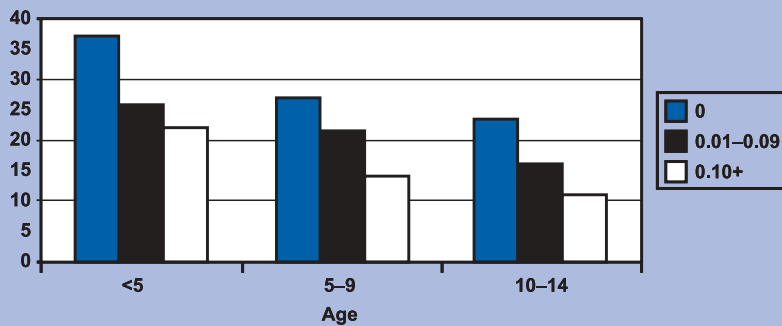


Figure 1. Restraint use among child passenger fatalities by child's age and the BAC of their driver, United States, 1985–1996
Adapted from *JAMA* 2000;283:17

Bar Charts

A bar chart is most effective for comparing amounts, frequencies, sizes, or magnitudes of several items at one time. Bar charts consist of horizontal or vertical bars of equal width, scaled in length to represent some quantity.

Formatting Guidelines for Bar Charts

- Make sure the space between the bars is no less than half the width of the bar and no more than twice the width of the bar.
- Identify the bars with a key.
- Use solid colors instead of patterns on the bars.
- Use contrasting colors for charts that have more than one series of bars.

Pie Charts

A pie chart presents data as wedge-shaped sections of a circle and shows the relative size of a whole divided into segments. The circle must equal 100%, or the whole of some quantity, with the wedges representing the various ways the whole is divided. Pie charts are the most easily understood at one glance.

Formatting Guidelines for Pie Charts

- Make sure the wedges together equal 100%.
- Begin at the 12 o'clock position, and sequence the wedges clockwise from the largest to the smallest.
- Restrict the number of wedges to seven. Too many items make the pie look cluttered and too few items will not make a useful graph.
- Give each wedge a distinctive color, pattern, shade, or texture.
- Keep all callouts (the labels that identify each wedge) horizontal, and include the percentage value for each wedge.
- Explode one slice to call attention to it.

Flowcharts

A flowchart illustrates, in sequence, the progressive steps of an operation. Flow charts allow the reader to identify the essential steps of the process quickly and easily. Most flowcharts go from left to right and top to bottom, but the flow may be different. Remember that in the strictest environments, each element of a chart has a specific meaning (e.g., boxes versus circles).

Formatting Guidelines for Flowcharts

- Arrange the items from left to right or top to bottom.
- Use arrows to indicate the direction.
- Label or identify all the steps in the process.
- Include a key for symbols readers may be unfamiliar with.

Example: Pie Chart

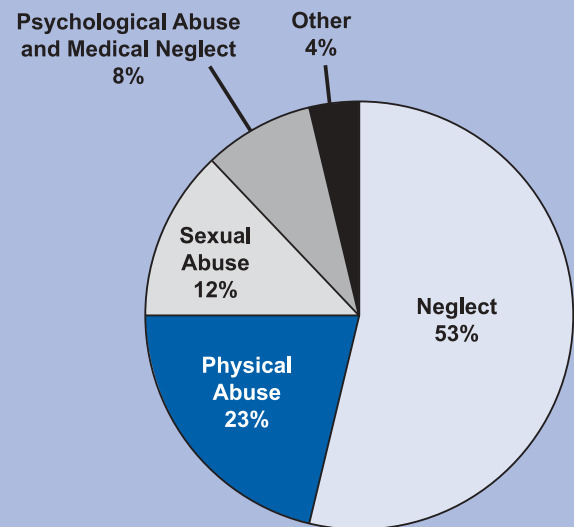


Figure 1. Types of child maltreatment
Source: Administration for Children Families

Example: Flowchart

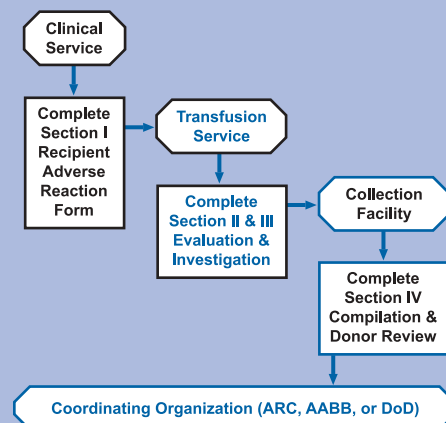


Figure 1. Adverse reaction reporting
Source: CDC, National Center for Infectious Diseases

Organization Charts

An organization chart illustrates the hierarchy of an organization, the functions of each unit or department, and how they interrelate. The title of each organizational component (e.g., person, office, section, or division) is placed in a separate box, which is then linked to other boxes appropriate to the organizational relationship.

Formatting Guidelines for Organization Charts

- Use a wider organizational block to denote more authority.
- Use a heavier line weight on the lines between the organizational blocks than on the blocks themselves.
- Whenever possible, keep organizational blocks of the same authority the same size.

Example: Organization Chart

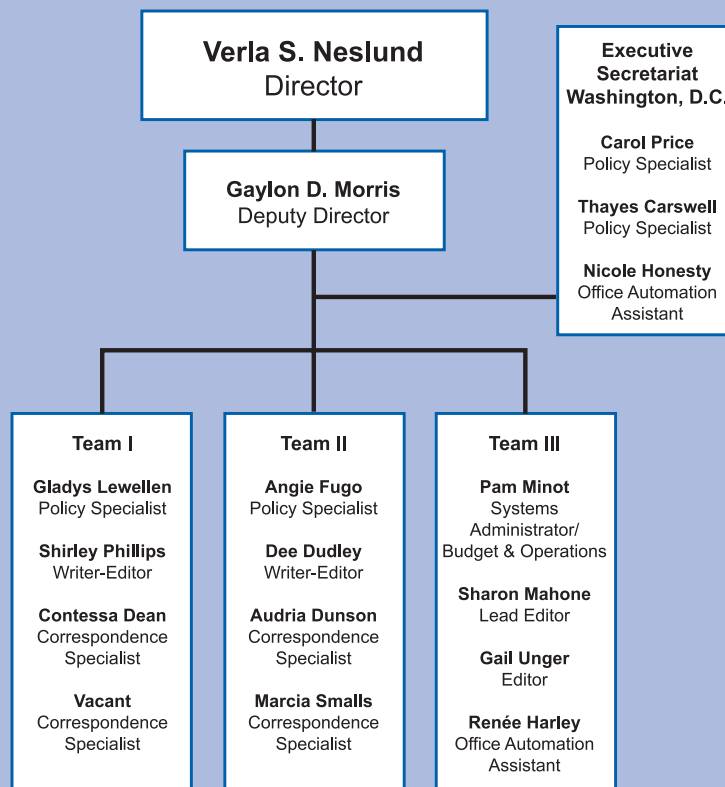


Figure 1. Executive Secretariat organization chart

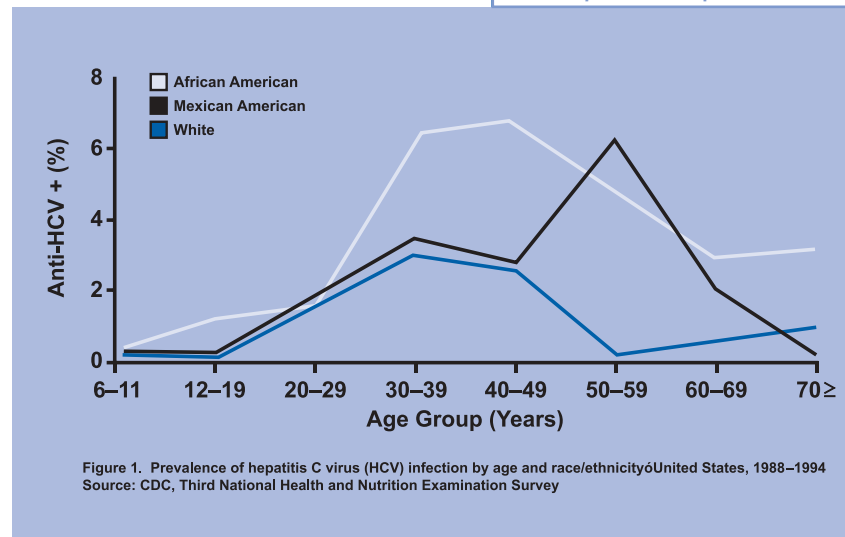
Line Graphs

A line graph is most effective for illustrating trends over time. The line graph shows the relation between two variables or sets of numbers by points connected in a continuous line. The graph can have more than one set of variables (more than one line), allowing for comparisons between two sets of statistics for the same period of time. When creating such a graph, label each line.

Formatting Guidelines for Line Graphs

- Indicate the zero point of the graph (where the two axes intersect).
- Divide the vertical and horizontal axis in equal portions.
- Use the minimum number of grid lines so the lines stand out against the background.
- Make all lettering horizontal if possible, except for the vertical axis, which is usually positioned vertically.

Example: Line Graph



7 Guidelines for Exhibits, Posters, and Electronic Presentations*

Different Documents, Different Purposes

A document intended to be presented to a live audience (in the form of an exhibit, poster, or *PowerPoint* presentation) differs greatly from a document intended to be read on paper (such as a fact sheet or a pamphlet). Therefore, the writing must be different as well. The following table lists the differences between the two types of documents. ▼

	Presentation Graphic (Exhibit, Poster, <i>PowerPoint</i>)	Printed Document (Article, Book)
Format	Large size, projected on a screen or mounted on a wall	Small size (typically 8 1/2" × 11")
Purpose	To support a message	To carry a message
Presentation	Outline of key points	Detailed, informative piece
Reader/Document Ratio	Many readers/one document	One reader/one document
Audience	Reader scans document	Reader reads document

Big, Bold, Simple, and Consistent

Consider the above-mentioned factors when making a presentation graphic. Above all, use a design that is big, bold, and simple. A presentation graphic is rarely too big, bold, or simple. Audiences won't complain about a slide being too simple, but they will complain about one being too complex and busy.

“Good things, when short, are twice as good.”

Balthasar Gracian

* A version of this chapter originally appeared in ATSDR's *VIC Style Guide*.

Communication Is the Key

Remember that you are the presenter of the message, and the presentation graphics must support your message, not be your message. Presentation graphics are only tools; they can greatly enhance your message, but they should not replace it. Following are a few suggestions to enhance your presentation.

- **Use visuals sparingly.** In fact, visualize giving your presentation without the visual aid. If you can do it, it is a sign that you, and not the slide show, are the master of the presentation.
- **Build in blank, black slides.** This enables you to speak to the audience directly without your regular slides distracting them.

Reasons for Using the CDC PowerPoint Templates

PowerPoint templates have been developed for use across CDC to project a consistent image to our many external audiences. These templates are available through the *CDC Identity Management System*, at <http://intra-apps.cdc.gov/cdcidentity/Login/Home/login.asp>. Regardless of which template you choose, the addition of your text and supporting images should be the only customization made to these pieces—the designs must remain constant. If you have any questions about how to use these items, contact your brand coordinator.

All CDC staff are encouraged to use the templates because the templates:

- Reinforce the identity of CDC in the minds of the public and distinguish it from other agencies. Using the templates ensures that the corporate identity of our agency is presented consistently and persuasively.
- Are easy and convenient to use. Remember that your goal is to deliver the presentation, not to spend all your time creating it.

Using the official templates will save you time, ensure your presentation looks professional, and reinforce the identity of the agency.

Creating Successful *PowerPoint* Presentations

Follow the guidelines below to produce a clean and professional presentation and to avoid an electronic circus. Most of these guidelines also apply to other types of presentations.

General Guidelines

Just because the presentation looks splendid on your computer screen at the office does not guarantee its effectiveness in front of a large audience. You need to rehearse the presentation, both for timing and delivery, and you must have a back-up plan.

- **Set up prior to audience arrival.** Arriving early will give you time to get acquainted with the facility and the equipment and to set up the material properly. You will also have time to greet your audience without being distracted by having to set up equipment at the last minute. You can never be certain that the technology you are using will be compatible with the resources available to you for the presentation. Checking out your equipment early can save you some embarrassment.
- **Practice on site.** If at all possible, practice your presentation at the actual site. This will enable you to become comfortable with the equipment and the setting. The best test for readability is to sit in the last row of the room. If the slide can be read from the last row, it is well designed.
- **Have a back-up plan.** Technology can be tricky. If possible, have handouts to distribute in case of equipment failure.

Design Guidelines

Resist the temptation to use every tool available in *PowerPoint*; excessive visual and auditory elements will distract from the message. The key to a well-designed document is knowing which elements to include, but also—more importantly—which ones to exclude. The best, most powerful designs are the simple ones, the ones that use the minimum number of elements for the maximum effect.

- **Use visuals sparingly.** Do not present too many slides. If you have more detailed support materials, such as tables, include them in a handout. A rule of thumb is one slide for every two minutes of presentation time.
- **Use a simple layout.** Horizontal rules, bullets, icons, clipart, and other visual markers can be effective when used in moderation. Your layout should focus on your message. Too many embellishments clutter the slide and distract from the primary focus of the slide, which is the message.
- **Make slides easy to see.** Be sure the text, pictures, and graphs are large enough to be seen even in the last row of the room. Use a 48-point font for titles and a 36-point font for body text.

Text Guidelines

Use words sparingly and leave plenty of white space in the slide. Crowding the slide with words is distracting to the audience. Your visual aids should support your presentation, not be your presentation.

- **Present only one message per slide.** Presenting more than one key point is distracting.
- **Use titles and headings correctly.** Place the title and headings in the same spot on every slide. Do not put a period at the end of the title because this encourages the reader to stop reading.
- **Use key words or phrases instead of complete sentences.** This will make the message easier to read and retain.
- **Follow the 6×6 rule.** Use no more than six lines of text and no more than six words per line. The slide should have no more than 36 words. The slide should be an outline of key points that support your message—not the message itself.
- **Avoid data dump in number charts.** Use a maximum of 30 numbers per slide. As a rule, put the complete data in handout form and present only the bottom line information in the slide.
- **Limit typefaces.** Use no more than three compatible, simple typefaces; otherwise the slide will look too busy.
- **Use serif typefaces preferably, such as Times New Roman** (serif typefaces have “feet” at the tops and bottoms of the characters). Use the bold setting to ensure the thin strokes of the serifs are easily readable. Keep in mind that fancy and unusual typefaces are much harder to read than simple ones.
- **Use upper and lowercase text.** All caps are difficult to read.
- **Use bullets smaller than text height.** This will help focus attention on your text. The bullet is only a marker preceding a line of text; it is not part of the message.
- **Left-justify bullets, dashes, and text.** This focuses the attention to the left side of the slide, at the start of every line of text.

Visual Guidelines

- **Resist the temptation to over design.** In the words of architect Mies van der Rohe, “Less is more.” Apply this motto and you will create a powerful and effective presentation.
- **Keep the background simple.** Do not use patterned backgrounds because they make the slide harder to read. A background should never interfere with the information presented on the screen. Use no more than three colors for text—two colors are preferred—or the slide will become too busy and distract the viewer from the message.
- **Use a strong contrast between background color and text color.** This ensures maximum legibility.

- **Use artwork with caution.** Artwork might be fun and entertaining, but it is sometimes inappropriate for professional presentations. Above all, the images must be relevant to the topic; don't include them just because they look pretty.
- **Limit sound effects and music.** Using too many sound effects or too much music will clutter your presentation and distract your audience from hearing your message.
- **Limit the number and kinds of transitional effects.** Using too many different transitional effects also will clutter your presentation and distract the audience.
- **Limit the use of animation.** Animation displays objects on your screen one at a time. For example, if you are using bulleted points, viewers see the first bullet first, then the second, and so on. There are many choices, but most are inappropriate if you want to achieve a professional look. Use discretion.

PowerPoint Tricks

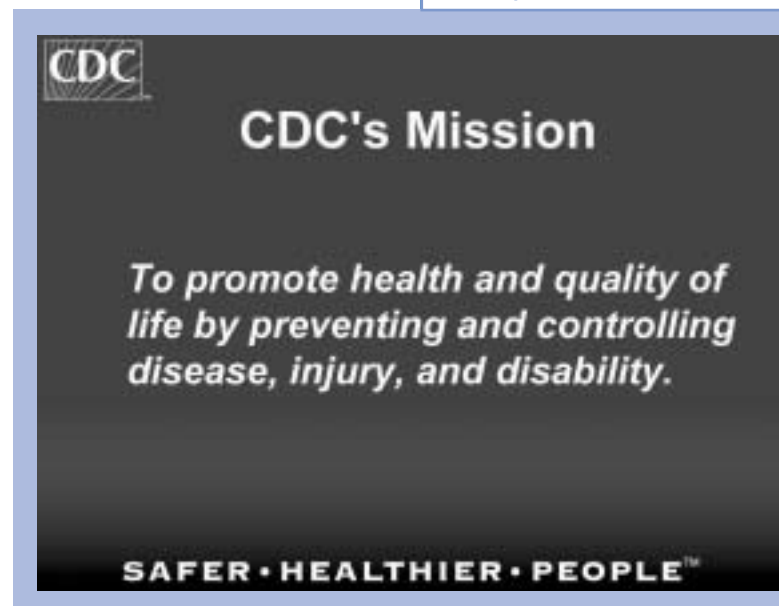
Here are a few tricks that will help you navigate between slides.

- **Know your slide numbers.** When you are in *slide show* view, you can move to any slide by hitting the slide number and pressing "Enter." This is useful, for example, if you are answering questions and want to move rapidly to a key slide.
- **Use the "b" key.** When you are in *slide show* view, you can get a black screen by pressing the "b" key. This is useful if you want to momentarily stop the presentation to answer a question. Press the key again to come back to the slide.
- **Have a specific concluding slide.** End your presentation with a slide that says *Thank You* or one that repeats the title of your presentation. As a safety measure, insert a blank slide so you don't mistakenly click out of the slide show.

Example: Bad



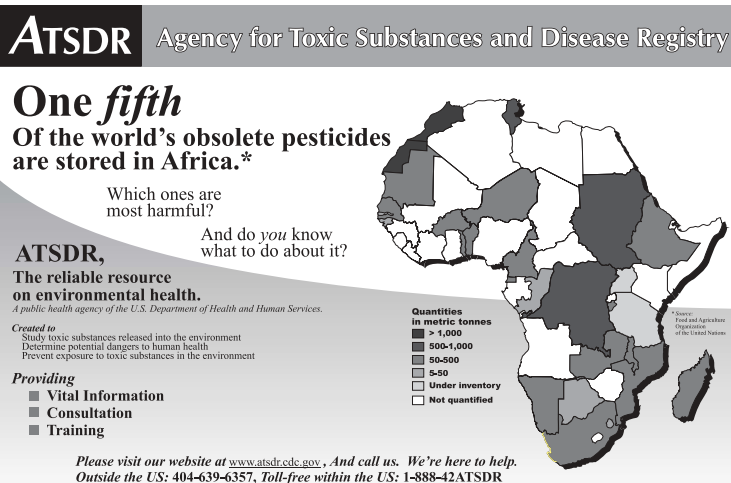
Example: Good



Example: Bad



Example: Good



Poster Preparation Tips

Consider the following factors when preparing information in poster form.

Capture Your Audience's Attention

Your exhibit needs to catch the attention of people passing by your booth. You have only a few seconds to do this, so your exhibit must be bold and designed more like a billboard than a fact sheet. Design the exhibit to grab attention at distances up to 10 feet; the narrative material and tables should be clear and readable at a minimum distance of 3 feet.

Keep Your Audience's Interest

An effective exhibit is not a report or a journal article hung on a wall. It should highlight, through visual display, the major points or components of your topic so the viewer can readily understand them. Resist the temptation to reproduce full pages of text. Viewers will be more intrigued by crisp, terse phrases and bulleted lists. No one will read full pages of dense text and you will lose the crucial points of your presentation. Consider distributing fact sheets or providing copies of materials to supplement your exhibit.

8 Writing for the Web

Many of the writing principles that govern printed material also apply to online material. Your writing must be concise, clear, precise, and correct. However, you need to make some adjustments in your approach and adapt the document to the unique requirements of the Web.

Most Web users reportedly use the Web to gather information, and they want the information quickly. To ensure that users get information quickly, follow these guidelines.

Be Brief

Reading text on a screen is more difficult, more tiring, and more tedious than reading text in a printed format. Because of the computer screen's low resolution, a person's reading rate is greatly reduced. Keep pages and paragraphs short, and use the active voice. Web documents should be shorter than their hard-copy counterparts.

Group the Information to Make It Scannable

Most Web users scan the page rather than read word for word. Keep your document scannable by using titles, headings, and subheadings and by chunking (grouping) the information in short paragraphs. Whenever possible, use bulleted lists. Nothing conveys the information better and faster than bulleted lists.

Be sure to use meaningful headings and subheadings, not catchy, cryptic ones.

Avoid: Methodology of Research Into Neural Tube Defects in the
 Hispanic Community

Avoid: Nature vs. Nurture—The Impact of Ethnic Beliefs on Children

Use: Studies Link Neural Tube Birth Defects to Low Folic Acid
 Consumption Among Hispanics

Although the first two choices are accurate (and even provocative), they are too cryptic. The most effective headings do not ask questions—they answer them.

“Everything should be made as simple as possible, but not one bit simpler.”

Albert Einstein

The third option telegraphs the content, linking birth defects to low folic acid consumption in Hispanics, and requires no supporting information.

Start with the Conclusion

Web users are usually impatient. To grab their attention, you need to present the conclusion and emphasize the key messages upfront, using the inverted pyramid style.

Example: Extensive research has found that all women of childbearing age should take 400 micrograms of folic acid every day before they get pregnant to significantly reduce the risk of certain birth defects.

This first sentence contains all of the critical information of the article; a reader can continue reading for more details about how the research was conducted and why folic acid works.

Be Simple

Avoid blinking icons, moving text, and aggressive colors; they are distracting and may make your information look unprofessional. Use graphics sparingly because they take a long time to download. A simple design and layout is better than a complex one. Readers want clear information fast, not visual noise that takes an eternity to download.

Be Accurate

Edit the page carefully for content, spelling, and grammar. Make sure that the links are accurate and active.

Use Consistent Page Design

A site that is easy to understand and navigate must have a consistent look. You can accomplish this by repeating certain elements throughout the pages. Each page should have the same look and feel as all the other pages on the site. The following elements should be repeated on all pages: color scheme, formatting elements, layout, typography (fonts), illustrations, and navigation buttons.

Twelve Tips for a Concise Scannable Web Site

Before completing your Web page or online document, check the following:

1. **Purpose and message.** Is the purpose achieved? Is the key message clear and presented at the top of the page?
2. **Audience.** Does the document reach the intended audience? Is appropriate jargon and vocabulary clearly explained?
3. **Content.** Is the information chunked? Are the titles, headings, and subheadings clear?
4. **Organization.** Is the page well organized? Is it navigable?
5. **Appearance.** Is the text easy to read? Is the document scannable?
6. **Graphics.** Are the graphics relevant? Do they complement the text, not substitute for it? Do the graphics enhance or distract from the message?
Do the graphics have descriptive captions?
7. **Speed.** Does the document download quickly?
8. **Currency.** Is the information up-to-date? Is there a mention of when the page was last updated?
9. **Reliability.** Is the information accurate and reliable? If outside sources are mentioned or linked to, are these credible?
10. **Accuracy.** Is the document error-free (no grammar mistakes, misspellings, typos, odd breaks)? Do links work correctly?
11. **Interaction.** Is contact information listed?
12. **Section 508 (accessibility).** Can individuals with disabilities navigate the site? For more details consult the CDC IT Accessibility page at <http://intranet.cdc.gov/accessibility/section508/default.htm>.

Electronic Glossary: How Do You Spell That Word?

The digital age has created enough new jargon to give anyone a headache. While the debate over the spelling of some Web-related words is now settled (most everyone agrees that Internet and Web are capitalized), it is still open for other terms (is it online or on-line?). Until dictionaries agree on a standardized spelling, the following list provides guidance on preferred spelling of computer-related terms at CDC.

<i>INCORRECT</i>	<i>CORRECT</i>
E-mail, E-Mail, email	e-mail
the internet	the Internet
the net	the Net
off-line	offline
on-line	online
url	URL
the web	the Web
Webmaster, Web master	webmaster
web site, Website, Web Site	website
world wide web	World Wide Web

Help from the Web

For more information, consult the following sites.

Government Websites

Writing for the Web

www.cdc.gov/nccdphp/cdnr/cdnr_sp0104.htm

This page by NCCDPHP gives advice on how to write and edit Web pages.

Writing for Online Reading

www.cdc.gov/od/hissb/docs/uisg-writing1.pdf

This short pdf file gives guidelines and standards for writing CDC documents that will be put online.

CDC Website Redesign Project

<http://intranet.cdc.gov/redesign/default.htm>

This website gives information on template design and other issues.

HHS Web Page Guidance

www.hhs.gov/policy/internet/webcust.html

This HHS site provides guidance on creating a customer-oriented Web page.

Methods for Designing Usable Websites

www.usability.gov/methods/collecting_writing.html

This site by the National Cancer Institute elaborates on how to write effectively for the Web.

Nongovernment Websites

The Web Style Guide

<http://info.med.yale.edu/caim/manual/contents.html>

This comprehensive style guide by Yale professors Patrick Lynch and Sarah Horton discusses all aspects of Web design.

Jakob Nielsen's Website

www.useit.com/

Jakob Nielsen is a renowned expert on Web usability.

The Sevloid Guide to Web Design

www.sev.com.au/webzone/design.asp

This site lists more than 100 tips and techniques for effective website creation.

9 CDC-Specific Guidelines

This chapter addresses CDC guidelines to be followed when mentioning CDC, its centers, institute, and offices (CIOs), and the Department of Health and Human Services (HHS). It also takes you through the steps of the clearance process and provides tips on correspondence.

Attribution to CDC, CIOs, and HHS

To ensure a consistent image and to promote the CDC identity, integrate the following elements into all CDC documents:

- Include a standard description of the agency.
- Reference HHS.
- Reference CDC properly.
- Reference CIOs properly.

CDC Templates

CDC has developed templates to ensure consistency when communicating about the agency. The templates are on CDC's *Identity Management System* at <http://intra-apps.cdc.gov/cdcidentity/Login/Home/login.asp>.

Including the Standard Description of CDC

Insert the following paragraph at the end of every press release. ▼

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

“He gains everyone’s approval who mixes the pleasant with the useful.”
Horace

Insert this message in any other materials as appropriate, including fact sheets and backgrounders, reports, correspondence, and websites. Tailor the standard language to reflect the specific health topics addressed in the content.

Example: The Centers for Disease Control and Prevention (CDC) protects hospital patients' health by preventing and controlling disease outbreaks; informs clinicians about the dangers of antimicrobial resistance and ways to prevent it; and works in partnership with state and local health departments and medical associations to promote clinical standards to prevent antimicrobial resistance.

Referencing CDC

Spell out the agency name the first time, followed by the acronym in parentheses. Use the acronym thereafter. Do not insert *the* in front of the acronym. However, using *the* is acceptable when referring to data, a product, or program that belongs to CDC. The possessive form of CDC can be used to convey the same meaning.

Examples: CDC is committed to improving the public's health and safety.
The *CDC Style Guide* is a quick and easy reference tool for employees.
CDC's style guide is a quick and easy reference tool for employees.

Referencing HHS

CDC must acknowledge its relationship to HHS on all documents, even ones developed for internal distribution. At least one of HHS's identifiers (either the eagle logo or the department's name spelled out) and at least one of CDC's identifiers (any treatment of the CDC design element or the agency's name spelled out) must appear somewhere on the document.

When referring to HHS, spell out the department the first time, followed by the acronym HHS (not DHHS) in parentheses. Use the acronym thereafter.

Specific guidelines on how HHS should be included on the cover and attribution pages of all communication products are found at <http://intranet.hhs.gov/read/esguide/>.

Referencing an Individual Center, Institute, or Office

The public often perceives CIOs as separate from CDC. This confusion primarily stems from the use of acronyms when referring to the CIOs, without the inclusion of the acronym CDC. To strengthen CDC's identity, avoid using acronyms and always connect the CIO to CDC.

Confusing: According to NCID, the threat of antimicrobial resistance is increasing.

Clear: CDC's infectious diseases center announced that the threat of antimicrobial resistance is increasing.

Where possible, refer to the specific program within the center. Identifying the specific program is sufficient; it is not necessary to reference the center.

Example: CDC's folic acid program seeks to increase consumption of folic acid among women of childbearing age.

However, when quoting a CIO director in a press release, use the complete name of the CIO and attribute the CIO as part of CDC.

Example: "Tomorrow marks the fifth anniversary of the SafeUSA partnership," said Dr. Suzanne Binder, Director of CDC's National Center for Injury Prevention and Control.

If you use the complete name of the CIO and if it appears multiple times in the document, spell it out the first time, followed by the acronym in parentheses. Use the acronym thereafter. However, if you carbon copy a CIO on the original document, spell out the CIO in the cc: line.

Incorrect: cc: NCID

Correct: cc: National Center for Infectious Diseases, CDC

Note: The above rule applies to external documents only. You may use the CIO's acronym when it is cc'd on internal documents.

Clearance Information

This section addresses the most common clearance processes, including the (1) Executive Secretariat clearance for correspondence, (2) HHS clearance for communication contracts, campaigns, and products, and (3) CDC clearance for media relations activities.

For additional information about HHS and CDC clearances, refer to the CDC *Clearance Info* page at <http://intranet.cdc.gov/od/oc/clearance/>, where you can also download forms.

Executive Secretariat Clearance Process

Any correspondence requiring the signature of the Director or Deputy Directors, CDC; the Assistant Secretary for Health and Surgeon General, HHS; the Deputy Secretary, HHS; the Secretary, HHS; or the President of the United States must be reviewed and cleared by CDC's Office of the Executive Secretariat.

When CIOs draft response letters or memoranda that have to be signed by any of these persons, the drafts must be sent back to the Office of the Executive Secretariat within the following time frames:

Director's signature	5 days
Deputy Director's signature	5 days
Secretary's signature	3 days

If CIOs are asked to reply to the senders directly, they have 5 working days to respond. CIOs are responsible for obtaining the proper signature(s), dating the response, and mailing the document. CIOs should then forward a copy of the signed, dated final copy to the Office of the Executive Secretariat so that the file can be closed.

Also, when CIOs initiate letters or memoranda that have to be signed by the above-mentioned persons, these documents must be submitted in draft form (i.e., double-spaced) to the appropriate Executive Secretariat contact person for clearance and processing. To find your CIO's contact person, call 404-639-7120. The draft must contain the proper approvals at the CIO OD level.

HHS Clearance Process

All communication campaigns; publications and audiovisual products; and contracts for communication activities and products must be cleared by HHS' Office of the Assistant Secretary for Public Affairs (OASPA) before any products can be developed. Submit all forms to CDC's Office of Communication.

HHS usually takes 3 to 4 weeks to respond to a clearance request. Requests involving sensitive content, expensive products, or large campaigns may take longer. To ensure adequate time, allow 6 weeks for the clearance process.

Note: HHS will occasionally respond more quickly to a clearance request. However, requests for rush approval should be limited to public health crises in which a CIO must produce materials immediately to meet the public's need for information.

The types of clearance procedures are

1. Communication campaign clearance (HHS Form 524).
2. Communication contract clearance (HHS Form 524).
3. Publications (HHS Form 615) and audiovisual clearance (HHS Form 524a).

A detailed explanation of the clearance process and the clearance forms are available at <http://intranet.cdc.gov/od/oc/clearance/>.

Clearance is NOT required for

- Reprints and minor revisions (e.g., contact names, meeting agendas, and phone numbers).
- Individual issues of journals and newsletters. These types of publications only need to receive clearance once a year. However, send two copies of each issue to OASPA.

CDC's Media Relations Division Clearance Process

Clear all media requests and all print, electronic, and Internet products developed for release to the media through the appropriate CIO communications office (assuring Center Director approval) and through CDC's Office of Communication Media Relations Division (MRD). Allow a minimum of 2 weeks for clearance.

Media Requests

Media requests will be directed to MRD, unless the CIO already has an agreed-upon plan to manage media calls.

All media requests for policy explanations, requests regarding high-profile or controversial issues, or any requests that have potential for national media interest must be coordinated through MRD. MRD will coordinate these requests with HHS/OASPA, as needed, and advise CIOs.

CIOs must inform MRD about on-camera media interviews in advance (those not involving national issues or sensitive areas), and inform MRD regarding media filming and/or videotaping that is scheduled on-campus. Media requests on subjects not related to your specific CIO must be referred to MRD.

Media inquiries, events, or initiatives that involve more than one CIO, or go beyond CDC purview (e.g., another federal agency) must be coordinated by MRD working closely with the appropriate CIO communication office(s) and OASPA.

No CDC staff should accept an invitation to a press event or press conference without prior approval by the appropriate CIO communication office and MRD, in consultation with the HHS press office.

After-hours media inquiries that come to CDC security staff are routed to the MRD director or designee, who will coordinate as appropriate with HHS and the CIO communication offices. CIO communications staff should have a system in place for after-hours contact, preferably beepers and/or on-call press officers.

Media Products

All print, electronic, and Internet products developed for release to the media must be cleared through the appropriate CIO communications office and MRD. In addition, all media materials developed by grantees or partners for CDC or including a CDC quote must be cleared by MRD before release.

All print materials must be formatted according to MRD guidelines and must include the HHS or CDC logo in the top left corner. A masthead template is available through CDC's *Identity Management System* at <http://intra-apps.cdc.gov/cdcidentity/Login/Home/login.asp>.

The CDC Office of Communication's Health Communication Division coordinates with CIOs on script development for television and films, including documentaries and specials. CIOs must keep MRD updated on all television, film, and Internet projects.

All CDC-sponsored organized media events, such as press conferences, media availabilities, and editorial boards, require MRD approval before commitments are made. MRD will notify HHS/OASPA and will work with them to involve the Secretary and other HHS and White House officials when appropriate. Participation by CDC representatives in organized media events sponsored by other government, private sector, and nonprofit organizations also must be cleared through MRD, before commitments are made.

Note: According to HHS policy, contractors are not used to promote media coverage of events or topics (e.g., pitching topics or events to media). Use OASPA staff, rather than contractors, to produce video news releases.

Working with CDC's Media Relations Division

CDC's policy is to provide timely and accurate information so that the public, Congress, and the news media may assess and understand CDC's health information and programs. Bear in mind the following points regarding media relations activities:

- Make available final reports, information, and recommendations.
- Create open, honest communication that is based on sound science and that conveys accurate information.
- Do not withhold information solely to protect CDC or the government from criticism or embarrassment.
- Release information consistent with the Freedom of Information Act.
- Base prevention messages on supportable scientific data and sound behavioral and communication research principles. At all times, maintain scientifically valid and accurate health messages.
- Create targeted health messages that are sensitive to language and cultural differences and community norms.

A final note: Remember to get official clearance on ALL materials before proceeding through the approval and printing process.

Executive Secretariat Correspondence Guidelines

Clarity and brevity are important features of all correspondence documents. Use plain English and avoid highly technical language or jargon. The policy of the Office of the Executive Secretariat is to insert two spaces at the end of a sentence. Please adhere to this rule when submitting correspondence to that office. Following are guidelines from CDC's Office of the Executive Secretariat for developing letters, memoranda, and information alerts and advisories.

Many of these guidelines come from the HHS Executive Secretariat, available at <http://intranet.hhs.gov/read/esguide/msges.html>.

Letters Guidelines

In-house Summary Statement

All CIO-originated correspondence must be accompanied by a one-paragraph justification called an in-house summary statement. The paragraph should include the following information: subject, purpose, summary, concerns (if any), recommended actions, contact person, and telephone number. See Appendix A for a sample in-house summary statement (page 129).

Summary Statement—Secretarial Correspondence

Letters requiring the Secretary's signature must include a summary statement. The CIO writes that summary statement and includes it as a cover page to the letter. All summary statements should serve as stand-alone documents and should not exceed one page. See Appendix A for a sample summary statement (pages 130–31).

Summary statements should be formatted as follows:

- Name of correspondent(s).
- Subject/issues raised by correspondent.
- Major points in the response.
- Other pertinent information.
- Contact person(s).

Salutation

Letters must be properly addressed and include the proper distribution list information.

The following table presents the correct way to send correspondence to members of Congress. ▼

<i>Person</i>	<i>Address</i>	<i>Salutation</i>
Senator (in Washington, D.C.)	The Honorable (full name) United States Senate Washington, D.C. 20510	Dear Senator (surname)
Senator (Local district/office)	The Honorable (full name) United States Senator Address	Dear Senator (surname)
Representative (in Washington, D.C.)	The Honorable (full name) House of Representatives Washington, D.C. 20515	Dear Dr./Mr./Ms. (surname) <i>Note: Do not write Dear Representative</i>
Representative (Local district/office)	The Honorable (full name) Member, U.S. House of Representatives Address	Dear Dr./Mr./Ms. (surname)

The complete list of salutations is in the *United States Government Printing Office Style Manual 2000*, available at www.access.gpo.gov/styleman/2000/chapter_txt-16.html.

Enclosure

Limit the letter to one or two pages. Include any additional information as an enclosure. If you include an enclosure, insert the word “Enclosure” at the bottom of the letter (or the word “Attachment” at the bottom of a memorandum) and mention it in the body of the letter. In addition, add the appropriate heading at the top of the first page of the enclosure.

Following are examples of heading formats for enclosures. Center and bold the heading. ▼

**Centers for Disease Control and Prevention
Response to the Honorable Jack Kingston on
Hepatitis Prevention and Control
Prepared May 2002**

OR

**Responses to Comments dated 05/15/02
by the Department of Health and Human Services
Draft for National HIV Case Surveillance System Guidelines
Prepared by the Centers for Disease Control and Prevention
May 2002**

OR

**Influenza Among Travelers on Cruise Ships
Prepared by the Centers for Disease Control and Prevention
May 2002**

Copy Notation

Every draft should include a copy notation, introduced by the initials *cc* and set two spaces after the signature block. The *cc* shows all the people who will get a copy of the letter or memorandum. The *cc* section also include other information such as file names and name of preparer.

General Correspondence

cc:

OD *[the Office of the Director always gets a copy]*

CDC/W *[for congressional correspondence, the Washington Office gets a copy]*

FMO *[for congressional correspondence, FMO gets a copy]*

NCEH *[CIO preparing the response; e.g., NCID, NIOSH, PHPPPO]*

CDC ID ES 1234; Doc. Name: pickaname.doc *[tracking number provided by the Office of the Executive Secretariat, document name provided by the CIO]*

Prepared by: RJackson, NCEH, (770) 488-7000 *[first initial and last name of preparer, no space, CIO, contact number]*

Spelling verifier used by: NSmith 8/12/01 *[first initial and last name of person who typed the letter, no space, date prepared]*

Correspondence from Congressional Liaison Office (CLO)

cc:

OD

NCHSTP

CLO/OS

FMO

OPS

CLO/OS No. 123456789

CDC ID 1234; Doc. Name: pickaname.doc

Prepared by: ESeiler, NCHSTP, (404) 639-8008

Spelling verifier used by: NSmith 09/20/2001

The following table offers additional guidelines on drafting letters and general memoranda. ▼

<i>DOs</i>	<i>DON'Ts</i>
<p><i>General</i></p> <p>Be responsive to correspondents' concerns. Put yourself in place of the correspondents. Would you be satisfied?</p>	<p><i>General</i></p> <p>Don't include extra information on a subject that does not address the correspondents' concerns.</p>
<p><i>Style</i></p> <p>Be brief. Keep responses to one page if possible but not more than two. On rare occasions, an enclosure may be required.</p>	<p><i>Style</i></p> <p>Don't include lengthy paragraphs describing technical matters in great depth.</p>
<p>Use plain English. Keep sentences and paragraphs short, where possible.</p>	<p>Don't use technical language or jargon (except when absolutely necessary and only when fully explained).</p>
	<p>Don't sound defensive.</p>
<p>Use active voice frequently.</p>	<p>Don't overuse passive voice.</p>
<p>Use <i>I</i> when making a personal statement. <i>Example:</i> I appreciated learning about. . .</p>	<p>Don't use <i>we</i> when making a personal statement. <i>Example:</i> We understand that you...</p>
	<p>Don't overuse the word <i>that</i>.</p>
<p>Use the word <i>attachment</i> when attaching material to a memo and the word <i>enclosure</i> when enclosing material with the letter.</p>	
<p>Spell out the word <i>percent</i>.</p>	<p>Don't use the % symbol.</p>
<p><i>Content</i></p> <p>In the first sentence, thank correspondents for providing their views on the subject of inquiry. In the second sentence, thank them for any congratulatory or personal statements.</p>	<p><i>Content</i></p> <p>Don't repeat the entire, lengthy question that was posed in the incoming letter.</p>
<p>Give the good news, a positive message, or alternative solution up-front.</p>	<p>Don't bury the good news at the end of the letter.</p>
<p>Use the response as an opportunity to inform correspondents about any of the following, if applicable/relevant:</p> <ul style="list-style-type: none"> ■ Approved funding increases in a program of concern. ■ Approved new initiatives. ■ Recent announcements. ■ An upcoming event. 	

<i>DOs</i>	<i>DON'Ts</i>
<i>Format</i> When referring to a date, use only the number (e.g., August 12)	<i>Format</i> When referring to a date, don't use the number followed by <i>th</i> (e.g., August 12th)
Use Times New Roman, font size 12	

Specific Memoranda Guidelines

The most frequently used types of memoranda are simple action, complex action, briefing, and information memoranda.

Simple Action Memorandum

Use this memorandum (sometimes referred to as a *Decision Memorandum*) to obtain approval to release a report, obtain agreement to issue a housekeeping or noncontroversial regulation, seek a decision on attending a meeting, and more.

This memorandum, addressing a single straightforward issue, should not exceed two pages. If you need approval to issue a lengthy report, plan, or other document, include an abbreviated summary and two copies of the report. Submit lengthy relevant background material, when necessary, in the form of tabbed attachments.

The issue section should contain a concise statement (preferably one sentence or short paragraph) of the issue or problem. If this memorandum is an invitation, include the invitation in this section, along with details (e.g., dates, times).

The discussion section should contain pertinent information regarding the origin, background, and implications of the issue or problem. It should also contain a brief statement explaining why the *Action Requested By* date should be met. See Appendix A for a sample of a simple action memorandum (pages 132–33).

Complex Action Memorandum

Use this memorandum to present an issue that is not straightforward and for which a variety of alternatives or options need to be presented. The key to this memorandum is the clear presentation of the issue and background, and the development of options, with pros and cons for each option presented in bulleted form.

Start at the beginning and state, in context, what needs to be done as well as the outcome. Present options and pros and cons in a neutral fashion so as not to favor any one side.

The issue section should contain a concise statement (preferably one sentence or short paragraph) of the issue(s) or problem(s).

The background section should contain pertinent information regarding the origin, background, and implications of the issue(s) or problem(s). It should also contain a brief statement explaining why the *Action Requested By* date should be met.

In the options and discussion section, each option should be listed clearly and concisely. Each option should be followed by a discussion that includes information about who would benefit if the option were chosen, who would be adversely affected, what would be the anticipated reaction of those affected, and how much the option will cost in terms of dollars, staff, and administrative responsibilities. Each discussion should be followed by the pros and cons, in bulleted form.

The recommendation section provides a recommendation regarding the suggested course of action. When several issues are presented, a recommendation for each set of options should be made.

The decision section should list each option or recommendation with appropriate approval/disapproval lines for the addressee's use. See Appendix A for a sample complex action memorandum (pages 134–35).

The following table offers guidelines on drafting simple action and complex action memoranda. ▼

<i>DOs</i>	<i>DON'Ts</i>
Provide a clear and concise explanation of the issue requiring a decision (preferably a short paragraph of the issue/problem).	
Provide framework of the decision to be made in the form of chronological background information.	Don't overwhelm the presentation with details.
Provide a minimum of two options. Include in the options section anticipated reactions from external groups (e.g., Congress, industry, states).	
Provide a minimum of two pros and cons for each option. Present the pros and cons in a balanced fashion.	Don't provide an unbalanced set of pros and cons.
Provide costs of options if available/applicable.	
Provide a date/time frame in which a decision is required only if a true time constraint exists (explain in the discussion section).	Don't provide a date/time frame unless a true constraint exists.
Make the case for selecting a particular option in the recommendation section.	

Briefing Memorandum

Use a briefing memorandum to brief HHS officials on a public health issue or to provide information for an upcoming event (e.g., meeting, speech, hearing). These memos should contain clear and concise information to familiarize HHS officials with the purpose of the briefing.

The *Background* section should contain information about the issue at hand. When appropriate, present questions that may be raised in the *Issues of Concern* section. The *Discussion* section should summarize HHS' current or previous responses to the issues addressed in the *Background* section. When appropriate, provide talking points. See Appendix A for a sample briefing memorandum (pages 136–40).

Information Memorandum

Use an information memorandum to provide the Secretary with information that the sender believes the Secretary should have. Limit the memorandum to two pages or less, divided into two sections (*Purpose* and *Information Text*). Add additional information if it improves the clarity of the document. See Appendix A for samples 1 and 2 of an information memorandum (pages 141–46).

Information Alert and Information Advisory Guidelines

Information Alert

This document should be submitted to the Secretary only for **urgent** matters, for example, when:

- An important public health or safety problem has been identified.
- New information has been obtained about a major issue of concern to the Secretary or the White House.
- A sensitive press/media story is imminent.

An information alert should only contain a few bullets describing

- The issue/problem.
- Why it is critical for the Secretary to have the information **now**.
- What the department is doing/planning/proposing to do to address the issue/problem.

When necessary, provide additional information as an attachment. See Appendix A for a sample information alert (pages 147).

Information Advisory

Because the Secretary's schedule may preclude face-to-face contact, an information advisory may be a suitable substitute. Use judgment when preparing an advisory and make clear why the Secretary needs to have the information. This document should be prepared for events/situations that could arise in the near-term.

An information advisory should be no longer than two pages and should describe

- The issue/problem.
- Some background.
- What the department is doing/planning/proposing to do to address the issue/problem.

When necessary, provide additional information as an attachment. See Appendix A for a sample information advisory (pages 148).

The following table offers guidelines on drafting information alerts and advisories. ▼

<i>DOs</i>	<i>DON'Ts</i>
Use information alerts for urgent matters requiring the Secretary's immediate attention.	Don't use information alerts or advisories when simple transmission of a document/information through the Executive Secretary, HHS, is all that is needed or if a secretarial action memorandum is more appropriate.
Describe why the information being conveyed through an information alert is urgent and what actions you are proposing to address the issue/problem.	
Keep information alerts to a few bulleted points.	
Use information advisories to inform the Secretary about an important matter that does not require his immediate attention.	
Keep information advisories to no more than two pages using a bulleted format.	
Indicate if there is press, congressional, or White House interest.	
Advise the Secretary of any other concern or controversy surrounding the issue.	
Add an attachment when necessary.	
Convey information not meeting the criteria for information alert or advisory to the Executive Secretary, HHS, using a short cover memorandum.	
	Don't use excessively technical language.

Transmitting Other Information

There will be other information that an OPDIV/STAFFDIV may want to provide to the Secretary's office that does not meet the criteria for an information alert or advisory. Such information should be transmitted with a short cover memorandum to the attention of the Executive Secretariat, HHS, who will then forward it to appropriate senior officials. The cover memorandum should summarize the nature of the information provided and the intended audience.

10 Reference Style

For biomedical and professional journal citations, CDC follows the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, available at www.icmje.org/.

When sending a manuscript to a journal, first check the specific journal's requirements, because some journals have style guidelines that differ from the Uniform Requirements.

Referencing in the Text

The Uniform Requirements follows the citation-sequence system. Citations are in parentheses and are numbered consecutively in text, tables, and figures. Full references (author, title, etc.) appear at the end of the document.

Guidelines for Referencing in the Text

- Number references consecutively in the order in which they are first mentioned in the text, tables, and figures.
- Number references that appear in tables or illustrations consecutively, as though they were part of the text.
- If a document is cited again, use the same initial number (do not assign a new number to that citation).

Example: The American and Western Pacific Regions have been certified free of indigenous wild poliovirus (1). Current challenges to global polio eradication efforts include ongoing intense transmission in northern India (2,3), and continued importations of wild poliovirus into polio-free areas (4–7).

Referencing at the End of the Document

List references in the order in which they appear in the text, tables, and figures. Abbreviate journal titles according to the National Library of Medicine's *Index Medicus*, available at www.nlm.nih.gov/tsd/serials/lji.html. The list of journals indexed is at ftp://nlmpubs.nlm.nih.gov/online/journals/ljiweb.pdf.

Following are examples of reference citations. (Some examples come from the Uniform Requirements.) In the absence of guidelines for some of the nonstandard communication materials, the citations have been adapted to mirror Uniform Requirements' guidelines.

“The secret to
creativity is knowing
how to hide your
sources.”
Albert Einstein

Journal Article

Standard Journal Article

One to Six Authors

Churchill JE, Ashley DL, Kaye WE. Recent chemical exposures and blood volatile organic compound levels in a large population-based sample. *Arch Environ Health* 2001;56(2):157–66.

More than Six Authors

Campagna D, Stengel B, Mergier D, Limasset JC, Diebold F, Michard D, et al. Color vision and occupational toluene exposure. *Neurotoxicol Teratol* 2001;23(5):473–80.

Organization as Author

The Cardiac Society of Australia and New Zealand. Clinical exercise stress testing. Safety and performance guidelines. *Med J Aust* 1996;164:282–4.

No Author Given

Cancer in South Africa [editorial]. *S Afr Med J* 1994;84:15.

Volume With Supplement

Shen HM, Zhang QF. Risk assessment of nickel carcinogenicity and occupational lung cancer. *Environ Health Perspect* 1994;102 Suppl 1:275–82.

Issue With Supplement

Payne DK, Sullivan MD, Massie MJ. Women's psychological reactions to breast cancer. *Semin Oncol* 1996;23(1 Suppl 2):89–97.

Volume With Part

Ozben T, Nacitarhan S, Tuncer N. Plasma and urine sialic acid in noninsulin-dependent diabetes mellitus. *Ann Clin Biochem* 1995;32(Pt 3):303–6.

* Some examples come from the Uniform Requirements.

Issue With Part

Poole GH, Mills SM. One hundred consecutive cases of flap lacerations of the leg in aging patients. *N Z Med J* 1994;107(986 Pt 1):377–8.

Issue With no Volume

Turan I, Wredmark T, Fellander-Tsai L. Arthroscopic ankle arthrodesis in rheumatoid arthritis. *Clin Orthop* 1995;(320):110–4.

No Issue or Volume

Browell DA, Lennard TW. Immunologic status of the cancer patient and the effects of blood transfusion on antitumor responses. *Curr Opin Gen Surg* 1993:325–33.

Pagination in Roman Numerals

Fisher GA, Sikic BI. Drug resistance in clinical oncology and hematology. Introduction. *Hematol Oncol Clin North Am* 1995;Apr 9(2):xi-xii.

MMWR Article

CDC. Certification of poliomyelitis eradication. The Americas, 1994. *MMWR* 1994;43:720–2.

Type of Article Indicated as Needed (e.g., Letter, Abstract)

Wassenaar T, Blaser M. Contagion on the Internet [letter]. *Emerg Infect Dis* 2002;8(3):335–6.

Book and Other Monograph

Personal Author(s)

Bland M. An introduction to medical statistics. 3d ed. Oxford (UK): Oxford University Press; 2000.

Editor(s), Compiler(s) as Author(s)

Wilson W, Drew L, Henry N, editors. Current diagnosis and treatment of infectious diseases. New York (NY): Mc Graw-Hill; 2001.

Organization as Author and Publisher

Institute of Medicine (US). Looking at the future of the Medicaid program. Washington, DC: The Institute; 1992.

Chapter in a Book

Ferguson J. Biological weapons and US law. In: Lederberg J, editor. Biological weapons: limiting the threat. Cambridge (MA): MIT Press; 1999. p. 81–92.

Conference

Association Publication

ACGIH. Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati (OH): American Conference of Governmental Industrial Hygienists; 1991. p. 95–6.

Conference Paper Presented at Meeting

Zarus GM, Nyhan T, Schmidt H, DeVoney D, Gonzalez A. Integrating technologies to investigate episodic airborne VOC exposures. Presented at: International Society of Exposure Analysis Annual Meeting; 2001 Nov 4–8, Charleston, SC.

Conference Proceedings

Kimura J, Shibasaki H, editors. Recent advances in clinical neurophysiology. Proceedings of the 10th International Congress of EMG and Clinical Neurophysiology; 1995 Oct 15–19; Kyoto, Japan. Amsterdam: Elsevier; 1996.

Conference Paper Published in Proceedings

Bengtsson S, Solheim BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun KC, Degoulet P, Piemme TE, Rienhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on Medical Informatics; 1992 Sep 6–10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. p. 1561–5.

Other Published Material

Newspaper Article

Terhune C. Smoking costs the nation \$157 billion per year, health researchers say. The Wall Street Journal 2002 Apr 12;Sect. A:3 (col. 5).

Magazine Article

Gibbs N. Making time for a baby. Time 2002 Apr 15;159(5):48–54.

Newsletter Article

Chlordimeform cotton tolerances end by December 1990 proposed. Pestic & Tox Chem News 1988;16(17):27.

Editorial

Baker JC. Hazards of welding [editorial]. Occup Health 1975;39:63–8.

Letter to the Editor

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Appendix A—Sample Correspondence

In-house Summary Statement

Subject: Invitation to the Secretary to Attend the 2002 Cancer Conference

The National Center for Chronic Disease Prevention and Health Promotion would like to invite Secretary Tommy G. Thompson to be the plenary speaker at the 2002 Cancer Conference, to be held in Washington, D.C., on June 11, 2002. The theme of this year's Conference is "Meeting the Challenges of Comprehensive Cancer Control" and is co-sponsored by the National Cancer Institute. Because of the Secretary's interest in cancer control, his presence and participation will provide an excellent opportunity to reinforce the Administration's commitment to addressing this chronic disease. We recommend that the Executive Secretariat process this invitation as soon as possible. Please contact Mr. John Smith at (404) 639-9826 if you have any questions.

Summary Statement—Secretarial Correspondence

NAME OF CORRESPONDENT: Representative Henry A. Waxman (D-CA)

SUBJECT/ISSUES RAISED BY CORRESPONDENT:

Congressman Waxman expressed concerns that releasing data from the Vaccine Safety Datalink (VSD) could jeopardize this important vaccine safety program if it compromises the willingness of professionals or families to participate.

MAJOR POINTS IN THE RESPONSE:

- The Department recognizes the importance of vaccine safety in facilitating public acceptance of immunizations.
- The Department will work to see if a data sharing process for the VSD can be developed that balances the need to protect the confidentiality of patients, as well as proprietary data, with the principle of openness in research.

OTHER PERTINENT INFORMATION:

None.

CONTACT PERSONS:

Mirtha Beadle, OS/ES, (202) 205-9042

Verla S. Neslund, CDC, (404) 639-7120

Secretarial Correspondence

The Honorable Henry A. Waxman
House of Representatives
Washington, D.C. 20515-6143

Dear Mr. Waxman:

Thank you for your letter expressing concerns that releasing data from the Vaccine Safety Datalink (VSD) project could endanger this important vaccine safety program if it compromises the willingness of professionals or families to participate. I want to assure you that the Department of Health and Human Services (HHS) recognizes the importance of vaccine safety in facilitating public acceptance of immunizations—one of our most valuable tools in disease control and prevention.

As noted by the Institute of Medicine in its reviews of vaccine safety during the past decade, large population cohorts like the VSD are essential for scientific studies to assess potential causal links between vaccine and adverse events. Furthermore, HHS recognizes that there are many other important collaborations between managed care and public health organizations and will work to prevent these collaborations from being jeopardized.

At the heart of the issue is how we can ensure investigations of vaccine safety concerns in the United States are of the highest scientific caliber and independence so the study findings will have the maximal credibility to the largest audience. To help attain these goals, the Department will work to see if a data sharing process for the VSD can be developed that balances the need to protect the confidentiality of patients, as well as proprietary data, with the principle of openness in research.

Please call me if you have any further thoughts or questions. I look forward to working with you on this issue.

Sincerely,

Tommy G. Thompson

Simple Action Memorandum

TO: The Secretary
Through: DS _____
COS _____
ES _____

FROM: Director
Centers for Disease Control and Prevention

SUBJECT: West Nile Virus Information for State Governors—ACTION

Action Requested By: July 22, 2002

ISSUE

In follow up to the Acting Principal Deputy Assistant Secretary for Health's August 23, 2001, briefing for you on the Department of Health and Human Services' (HHS) West Nile virus activities, attached for your approval and signature is a letter to State Governors providing information on HHS and other federal agencies' support available to the states to help facilitate a coordinated effort to mitigate the impact of West Nile virus and other emerging infectious diseases.

DISCUSSION

There has been considerable public and media attention given to the continued emergence of West Nile virus in the United States. Since its initial recognition in the Northeast in the late summer of 1999, the virus has spread via migratory birds to 21 states and the District of Columbia, with the most recent identification in areas of the deep South and upper Midwest. Wherever this mosquito-transmitted virus has been detected, it has generated concern about its potential for causing significant outbreaks of human illness. Other concerns include its impact on equine populations and wildlife ecology, the effectiveness and safety of control measures used to reduce the risk to communities, and the costs associated with monitoring and control measures.

The federal agency leading the West Nile effort is the Centers for Disease Control and Prevention (CDC), which is responsible for assisting the states in tracking the virus, providing public education and control guidelines, and providing laboratory diagnostic

training and support. CDC scientists provide technical assistance, and most states have requested and received financial support from CDC. The National Institutes of Health is supporting, through universities and the private sector, research designed to develop effective therapies and a human vaccine for this and other similar illnesses, while CDC is conducting research on the effectiveness of control measures and their optimal application. Recently, a vaccine for West Nile virus was provisionally licensed by the U.S. Department of Agriculture to protect our valuable equine populations. The vaccine is already being shipped by the company to affected areas of the eastern United States. The Environmental Protection Agency regulates pesticides and provides assistance in ensuring appropriate applications of control measures. The Department of Interior's U.S. Geological Survey's National Wildlife Health Center in Madison, Wisconsin, supports bird testing throughout the country.

Even though there is intense federal activity and support to address the introduction of West Nile virus, the major effort for prevention and control rests at the state and local level. As at the federal level, aspects of West Nile virus monitoring and control cross agency boundaries within each state, and coordination at all levels is essential to have maximum effect.

The introduction of West Nile virus into the United States illustrates the continued threat of infectious diseases, both naturally occurring and intentional. The key to addressing them is a well-resourced and trained public health system working in a coordinated fashion combined with cutting-edge science to combat and control disease.

RECOMMENDATION

That the Secretary sign the attached letter and send to all State Governors.

DECISION

Approved _____ Disapproved _____ Date _____

Julie Louise Gerberding, M.D., M.P.H.

Attachment:

Tab A – Letter to State Governors

Complex Action Memorandum

TO: The Secretary
Through: DS _____ (when appropriate)
COS _____
ES _____

FROM: Assistant Secretary for Management and Budget
Centers for Disease Control and Prevention

SUBJECT: How to prepare a complex action memorandum—ACTION

Action Requested By: July 5, 2002

ISSUE

Insert a concise statement (preferably one sentence or short paragraph) of the issue(s) or problem(s).

FACTS

Insert pertinent information regarding the origin, background, and implications of the issue(s) or problem(s).

Also insert a brief statement explaining why the “Action Requested By:” date should be met.

Single-space text, double-space between paragraphs.

OPTIONS AND DISCUSSION

1. OPTION: List each option clearly and concisely.

DISCUSSION: After each option, insert a discussion section that includes information about who would benefit if the option were chosen, who would be adversely affected, what would be the anticipated reaction of those affected, and how much the option will cost in terms of dollars, staff, and administrative responsibilities.

PROS AND CONS: Insert the pros and cons for each option, in bulleted form.

Pros:

-
-
-

Cons:

-
-
-

2. OPTION:

DISCUSSION:

Pros:

RECOMMENDATION

Provide a recommendation regarding the suggested course of action. When several issues have been presented, provide a recommendation for each set of options.

DECISION

1. OPTION: List each option or recommendation with appropriate approval/disapproval lines for the addressee's use.

Approved_____ Disapproved_____ Date_____

2. OPTION: _____

Approved_____ Disapproved_____ Date_____

(Signing Official's Name)

2 Attachments:

Tab A – Copy of Report on...

Tab B – Letter to Senator Smith

Briefing Memorandum

TO: The Secretary
Through: DS _____
COS _____
ES _____

FROM: Acting Principal Deputy Assistant Secretary for Health

SUBJECT: Vaccine Issues — BRIEFING

TIME: May 11, 2001, 10:30 – 11:30 a.m.

PLACE: The Secretary's Conference Room

PARTICIPANTS

Arthur Lawrence
Martin Myers
David Fleming
Ben Schwartz
Karen Midthun
John La Montagne
Thomas Balbier
William Raub
David Benor

PURPOSE

The purpose of this briefing is to discuss ongoing activities to address two challenges to our immunization programs—ensuring an adequate supply of important vaccines and maintaining the public's trust and confidence in vaccines.

BACKGROUND

Vaccine Supply Issues

There are a number of factors that affect vaccine supply and distribution.

1. Influenza Vaccine - The purchase, distribution, and administration of influenza vaccine are mainly private-sector responsibilities. Since supply is determined by commercial companies and distribution is not controlled by the government, we remain potentially vulnerable to shortages or delays in the future.

The United States experienced a delay in the production of the influenza vaccine for the 2000-2001 influenza season. Some vaccine companies experienced difficulty with growing a new virus strain. Two of four companies had manufacturing problems; one of these companies decided not to produce the vaccine. The delay in production of the vaccine led to subsequent distribution problems; however, a potential vaccine shortage was averted. TAB A describes actions taken by the Department's Interagency Vaccine Groups (IAVG) to help ensure an adequate supply of influenza vaccine for consumers.

Last November, 29 members of Congress asked the General Accounting Office (GAO) to investigate the actions taken by vaccine suppliers. GAO is expected to publish a report on its findings in mid-May. The draft GAO report has been circulated for Departmental comment. On March 7, 2001, Representative Peter DeFazio (Oregon) introduced a bill, H.R. 910, to amend the Public Health Service (PHS) Act to provide that the Secretary may undertake the emergency distribution of influenza vaccine through assumption of title to all influenza vaccines at the original contracted prices. In addition, on March 8, 2001, Representative Gary Condit (California) proposed legislation, H.R. 943, to amend the PHS Act to permit the use of appropriated funds to support limited administrative costs of a distribution system for influenza vaccine.

For the 2001-2002 influenza season, there are currently three vaccine companies producing influenza vaccine for the U.S. population. In a usual year, 70-76 million doses of vaccine are distributed. Based on vaccine companies' estimates in a "best-case scenario," the total possible vaccine available for this season may be up to 84 million doses. However, there is likely to be a substantial amount of vaccine available late season, resulting in a situation similar to last year.

A "worst-case scenario," assuming one company does not produce any vaccine, would result in the availability of approximately 60 million doses. One company is working under a consent decree and must comply with various regulatory stipulations and have approved inspections by an independent review group and the Food and Drug Administration (FDA). Results of these inspections may influence whether the manufacturer chooses to produce any vaccine at all, and there is a high likelihood that any vaccine produced would be delayed.

2. Tetanus Toxoid-Containing Vaccines (DTaP, Td, and DT) - Since 2000, the number of vaccine companies distributing diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine decreased from four to two vaccine companies. Inventories have been low; however, as a result of FDA's approval of a new preservative-free formulation of Tripedia (one of the two DTaP vaccines in distribution), vaccine companies should soon be able to increase supply and comply with vaccine demand.

Only one company is distributing all adult Td, pediatric DT, and tetanus toxoid vaccines. This company is prioritizing distribution to the military, hospitals, and trauma centers. Vaccine shortages have occurred locally around the country and, in some circumstances, routine Td boosters recommended every 10 years are being suspended. It may be 12-18 months before supply can meet demand. TAB B describes actions taken by the IAVG to address vaccine shortages.

3. Oral Polio - Inactivated polio vaccine is recommended for routine immunization against polio. However, in the event of a polio outbreak, CDC believes that oral polio vaccine (OPV) would be the vaccine of choice. Currently, the United States does not have a stockpile of OPV, which may be needed in response to an imported outbreak. The only U.S. licensed vaccine company terminated production in 2000. The CDC and FDA are working with two companies to develop an OPV stockpile.

Public Trust and Confidence in Vaccines

Because immunization coverage levels in the United States are high and disease rates are low, public attention is shifting from the benefits of vaccines to potential vaccine risks. Since vaccination is a relatively memorable event, any illness following immunization may be attributed to the vaccine. A serious illness following immunization could be either coincidental or, in very rare instances, caused by the vaccine. The U.S. House of Representatives' Committee on Government Reform has held several hearings on the issue of vaccine safety since May 1999. The IAVG has provided testimony about our vaccine safety system at several of the hearings, most recently at a hearing, "Autism - Why the Increased Rates? A One Year Update," on April 25-26, 2001. TAB C delineates actions taken by the IAVG.

ISSUES OF CONCERN (when appropriate)

DISCUSSION

Vaccine Supply Issues

Influenza Vaccine

- The influenza vaccine companies have stated that they have the production capacity to equal or exceed last year's production. However, FDA believes there is uncertainty that capacity is sufficient in the event that any one company experiences production difficulties.
- CDC has developed a contingency plan (TAB D) for addressing a potential influenza vaccine shortage or delay.
- The Director, CDC, has sent a letter of appreciation to Aventis Pasteur for agreeing to work with CDC to implement contingency plans in the event of a vaccine shortage (TAB F).
- CDC has requested that States develop contingency plans in the event there is a shortage of influenza vaccine and has provided written guidelines to assist them in planning. CDC requested states submit their draft contingency plans by June 2001. CDC will hold a workshop at the National Immunization Conference in May 2001 to share planning efforts and best practices so that plans can be finalized by August of this year.

Public Trust and Confidence in Vaccines

- As part of the IAVG's Vaccine Safety Implementation Plan, a contract was recently initiated with the Institute of Medicine (IOM) of the National Academy of Sciences to establish an Immunization Safety Review Committee for a period of 3 years. During this first year of reviews, the committee will look into allegations of potential links between autism and vaccines, thimerosal-containing vaccines and developmental disorders, and the harmful effects, if any, of receiving multiple vaccines simultaneously. The IAVG will monitor the IOM's reviews for appropriate action. A copy of the IOM's first report examining alleged linkages between measles-mumps-rubella vaccine and autism is provided in TAB E.
- CDC is funding the establishment of new Clinical Immunization Safety Assessment Centers to improve scientific understanding of vaccine safety issues at the individual patient level. Such studies may provide insight into the pathogenesis and risk factors of adverse vaccine reactions.
- FDA continues numerous actions to assure the safety and purity of vaccines, many in collaboration with the IAVG. These include research and standards to reduce or remove the potential risk from any unintended presence of viruses or other impurities, including removal and reduction of unneeded or potentially harmful

additives (e.g., mercury as thimerosal), and facilitating development of newer, more highly purified types of vaccines (e.g., purified or recombinant protein and DNA vaccines).

TALKING POINTS (when appropriate)

Arthur J. Lawrence, Ph.D.
Assistant Surgeon General

6 Attachments:

Tab A - Influenza Vaccine

Tab B - Tetanus Toxoid-Containing Vaccines

Tab C - Public Trust

Tab D - Vaccine Contingency Plan

Tab E - IOM Report

Tab F - Letter to Aventis Pasteur

Information Memorandum—Sample 1

TO: The Secretary
Through: DS _____
COS _____
ES _____

FROM: Director
Centers for Disease Control and Prevention

SUBJECT: Vaccine Safety Datalink—INFORMATION

PURPOSE

To provide information concerning Representative Don Burton's (R-IN) plans to subpoena the Vaccine Safety Datalink (VSD) database and to share a proposal by the Centers for Disease Control and Prevention's (CDC) National Immunization Program (NIP) to protect patient privacy while allowing independent verification of key VSD study results.

INFORMATION TEXT

The Vaccine Safety Datalink (VSD) was established in 1991 for the scientific study of the safety of vaccines. It currently includes information on medical events, laboratory utilization, demographics, and immunization histories on approximately 7.5 million individuals enrolled at eight health maintenance organizations (HMOs). This database permits the government to conduct research evaluating suspected side effects after immunizations in a sufficiently large population. There has been a recent increase in public interest to access the VSD data. This interest has prompted the VSD HMOs to seek further assurance from CDC that the privacy and confidentiality of their patients will be safeguarded.

Data sharing with external researchers has never been done with the VSD files; in fact, even the participating HMOs have not had access to the complete VSD data file. A staff person of Representative Dan Burton, Chair, House Government Reform Committee, has indicated she plans to subpoena this database. The participating HMOs have written that release of records that would compromise patient confidentiality or proprietary issues would cause them to withdraw from the VSD project. If this were to

occur, it would seriously impede the government's ability to study rare vaccine-related adverse events (e.g., rotavirus vaccine and intussusception). Additionally, the HMOs have stated that their ability to collaborate in other public health activities will depend on how the VSD issue is resolved.

Congressman Burton originally requested files used in an analysis of the relationship between infant exposure to thimerosal in vaccines and the risk of neurodevelopmental disorders. His staff person, Ms. Beth Clay, has requested that they be given access to VSD files so that other researchers may reanalyze the data and determine if their conclusions match those of CDC. Her initial request has evolved, and she is now requesting all of the "raw data" from the VSD so that it can be made available to non-VSD researchers. She has not put this request in writing nor identified to whom the data would ultimately be provided.

CDC is concerned about the privacy rights of involved patients and the proprietary rights of participating HMOs. The VSD contains enough detailed and dated information on each individual that the removal of names and addresses is insufficient to ensure that individual patients or HMOs would remain unidentified. It is possible to identify many patients by combining a birth date with the dates on which specific kinds of medical care are delivered, or by combining current VSD data with other public access data that are not under the control of CDC or VSD. This becomes problematic for individuals with rare conditions or those who are prescribed uncommon medications. Identification of individuals could have major negative consequences to the individuals as well as to the health plans.

CDC is aware that outside groups have strong scientific and personal interest in the results of VSD analyses conducted at CDC. When CDC results do not support their own theories and opinions, the desire to scrutinize what was done and to conduct a reanalysis is understandable. CDC supports the openness of research and the different perspectives and insights that can be gained when studies are repeated. However, CDC-supported data sharing should abide by accepted principles of human subjects research and scientific standards. CDC is proposing a means to allow some reanalysis be done with VSD files, and the outline of this proposed system is provided at Tab A.

Julie Louise Gerberding, M.D., M.P.H.

Attachment:

Tab A - Proposal

Information Memorandum—Sample 2

TO: The Assistant Secretary for Health

FROM: Deputy Director for Science and Public Health
Centers for Disease Control and Prevention

SUBJECT: Follow-up to January 30, 2002, Briefing on Tobacco-Specific
Nitrosamines in Tobacco from U.S.- and Foreign-Brand Commercial
Cigarettes Purchased Outside the United States—INFORMATION

PURPOSE

To provide answers to questions that were raised at the January 30, 2002, Departmental briefing regarding the Centers for Disease Control and Prevention's (CDC) research on tobacco-specific nitrosamines (TSNAs) in tobacco from U.S.- and foreign-brand commercial cigarettes purchased outside the United States.

INFORMATION TEXT

Background:

CDC has completed a study that tested the hypothesis that U.S.-brand cigarettes purchased internationally have significantly higher TSNA levels than the locally popular non-U.S.-brand cigarettes purchased in the same country. The study examined cigarettes from the United States, the ten most populous countries in the world (in addition to the United States), and three additional countries that were selected so that each of the six World Health Organization regions were represented by at least two countries. These countries have a total population of approximately 3.8 billion (approximately 65 percent of the world total) and include an estimated 674 million smokers (approximately 60 percent of all smokers in the world).

Results from the study show that the level of TSNAs in cigarette tobacco vary widely among brands sold around the world. The TSNA levels were significantly higher in Marlboros than in the popular non-U.S. brands in 11 of 13 foreign countries studied. (Marlboros are the world's top-selling brand of cigarettes and the only transnational brand that could be purchased in all 13 foreign countries). Variations in TSNA levels most likely result from differences in tobacco blends and manufacturing processes.

Specific Issues:

Three key questions were raised at the January 30, 2002, Departmental briefing. A brief answer to each of these questions is provided below. Additionally, summaries of the scientific literature in support of these answers are provided in the attachment at Tab A, which also includes answers to specific questions regarding TSNA. Copies of key articles that provide additional reviews of scientific issues related to the carcinogens in tobacco and questions raised at the January 30 Departmental briefing also are provided at Tab B. In addition, Tab C contains Figure 11, which demonstrates that the induction of lung tumors in rodents by NNK follows a dose-response relationship across a range of total doses from approximately 10 mol/kg up to 10,000 mol/kg.

Question 1: What is the dose-response curve for NNK (the TSNA most closely linked to lung cancer risk) exposure and lung cancer inducement?

Response 1: The rate of induction of lung tumors in rodents by NNK follows a dose-response relationship across a range of doses from approximately 10 mol/kg up to 10,000 mol/kg.

Question 2: Are the levels of expected NNK exposure from cigarettes sufficient to saturate metabolic pathways relevant to this curve?

Response 2: No, concentrations of NNK in cigarette smoke would not be anticipated to saturate metabolic pathways involved in enzyme-mediated detoxication or bioactivation of NNK. The calculated lifetime NNK dose of a smoker is notably close to the lowest total dose of NNK shown to induce lung tumors in rats. As is typical of animal toxicology studies, high doses are employed in order to more rapidly induce high rates of tumors in a small number of animals. Lung tumor incidence continues to increase when rats are administered total doses of NNK that are 300-400 fold higher than the calculated total lifetime dose of NNK experienced by a smoker.

Question 3: If the NNK exposure levels from cigarettes are so much lower than the levels tested in animal toxicology studies, what is the evidence to suggest that lowering the level of NNK exposure from cigarettes might potentially reduce lung cancer risks?

Response 3: Compared with smokers, nonsmokers with prolonged exposure to environmental tobacco smoke (ETS) have 15-20 fold lower levels of exposure to NNK and proportionally lower but still significantly elevated risks of lung cancer. Thus, if

there is a threshold for risk from pulmonary carcinogens in tobacco smoke, it is below the exposure level of ETS-exposed nonsmokers. NNK is one of the most potent and highly concentrated of the pulmonary carcinogens in tobacco smoke. However, since TSNAs (including NNK) are only one of several classes of carcinogenic compounds found in tobacco and tobacco smoke, the potential magnitude of the impact of reducing TSNAs alone on overall cancer risk cannot be estimated.

Conclusion:

The 2000 U.S. Surgeon General's report, *Reducing Tobacco Use*, stated that manufactured tobacco products should not be any more harmful than necessary given available technology. The pattern of results in the recent CDC study indicate that manufacturers can and do produce cigarettes with lower TSNA levels compared with leading U.S. brands. Yet, even if manufacturers lower the levels of one group of carcinogens (such as TSNAs), it does not necessarily mean the cigarettes would be less toxic overall. Consequently, the only effective way to prevent tobacco-related illness is never to smoke or to quit smoking.

CDC will publish the results of this important study in the scientific literature and continue to conduct research on levels of harmful constituents in tobacco products, on smoke from tobacco products, and on blood and urine specimens from people who smoke and those exposed to secondhand tobacco smoke. If you have additional questions, CDC scientists would be happy to discuss the results from their research with you further or provide additional information from the scientific literature.

Julie Louise Gerberding, M.D., M.P.H.

cc:

Assistant Secretary for Health

3 Attachments:

Tab A - Biological Relevance of Tobacco-Specific Nitrosamines and NNK Exposure Levels to Lung Cancer in Smokers

Tab B - Selected Research Articles

Hecht SS. Tobacco Smoke Carcinogens and Lung Cancer. *Journal of the National Cancer Institute*, 1999;91(14):1194-1210.

Hoffmann D, Hoffmann I, El-Bayoumy K. The Less Harmful Cigarette: A Controversial Issue. *Chemical Research in Toxicology*, 2001;14(7):768-790.

Stellman SD, et al. Smoking and Lung Cancer Risk in American and Japanese Men: An International Case-Control Study. *Cancer Epidemiology, Biomarkers & Prevention*, 2001;10:1193-1199.

Tab C - Figure 11 "Relationship between dose of NNK and lung tumor incidence in male F-344 rats" from Hecht SS. 1998. *Chem Res Toxicol*. 11(6):580.

Information Alert

DATE: June 21, 2001

SUBJECT/LEAD COMPONENT: Human Plague/CDC

WHY THIS INFORMATION IS CRITICAL NOW: A plague-related die-off of a prairie dog colony and a suspected fatal case of bubonic plague in a 28-year-old male have occurred in Colorado Springs, Colorado. The *Colorado Springs Gazette* reported on Wednesday, June 20, that health officials are investigating the death of the man who lived near the prairie dog colony. This incident has also been reported to CNN.

SUMMARY OF ISSUE AND DEPARTMENT RESPONSE/ACTIONS:

- Plague epizootics (i.e., disease in animals) are common in prairie dogs along Colorado's Front Range, and the local health department has taken appropriate measures to reduce risk of human exposures to this disease.
- CDC is collaborating with local and state public health authorities to respond to this outbreak by providing epidemiologic follow-up and diagnostic assistance for the suspect human case.
- Autopsy samples for the suspect case patient will be sent to CDC in Atlanta for a pathology analysis; other diagnostic tests are pending.

CONTACT:

Mirtha Beadle, OS/ES, (202) 205-8943

Verla S. Neslund, CDC, (404) 639-7120

Information Advisory

DATE: March 15, 2002

SUBJECT/LEAD COMPONENT: Attendance of Dr. John Marburger, III at the Centers for Disease Control and Prevention's (CDC) Third International Conference on Emerging Infectious Diseases (ICEID 2002) on March 24–27, 2002.

WHY THIS INFORMATION IS IMPORTANT FOR THE SECRETARY: To ensure that the Secretary is aware that Dr. John Marburger plans to attend the ICEID 2002 Conference in Atlanta on March 24–27.

SUMMARY OF ISSUE, BACKGROUND, AND DEPARTMENT RESPONSE/ACTIONS:

- CDC invited Dr. John Marburger, III, Director, Office of Science and Technology Policy, Executive Office of the President, to attend and speak at the ICEID 2002 Conference in March. We understand from discussions with his staff that he plans to attend the Conference.

CONTACT:

Mirtha Beadle, OS/ES, (202) 205-9042

Verla S. Neslund, CDC, (404) 639-7120

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“What is conceived
well is expressed
clearly.”

Nicolas Boileau

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The CDC IT Accessibility

<http://intranet.cdc.gov/accessibility/section508/default.htm>

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

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www.whitehouse.gov/omb/fedreg/ombdir15.html

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www2.yourdictionary.com/index.shtml

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www.nlm.nih.gov/tsd/serials/lji.html

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www.icmje.org/

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The CDC Identity Management System

<http://intra-apps.cdc.gov/cdcidentity/Login/Home/login.asp>

CDC's Scientific and Technical Information Simply Put

www.cdc.gov/od/oc/simpput.pdf

E-Resources for Copy Editors

www.nyu.edu/classes/copyXediting/eresources.html

The Elements of Style

www.bartleby.com/141/

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www.writecontent.com/Writing_Tools/Editing____Research_Links/editing____research_links.html#amusements

The Plain English Network's (PEN) Website

www.plainlanguage.gov

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CDC Website Redesign Project

<http://intranet.cdc.gov/redesign/default.htm>

HHS Web Page Guidance

www.hhs.gov/policy/internet/webcust.html

Jakob Nielsen's Website

www.useit.com/

Methods for Designing Usable Websites

www.usability.gov/methods/collecting_writing.html

The Sevroid Guide to Web Design

www.sev.com.au/webzone/design.asp

The Web Style Guide

<http://info.med.yale.edu/caim/manual/contents.html>

Writing for Online Reading

www.cdc.gov/od/hissb/docs/uig-writing1.pdf

Writing for the Web

www.cdc.gov/nccdphp/cdnr/cdnr_sp0104.htm

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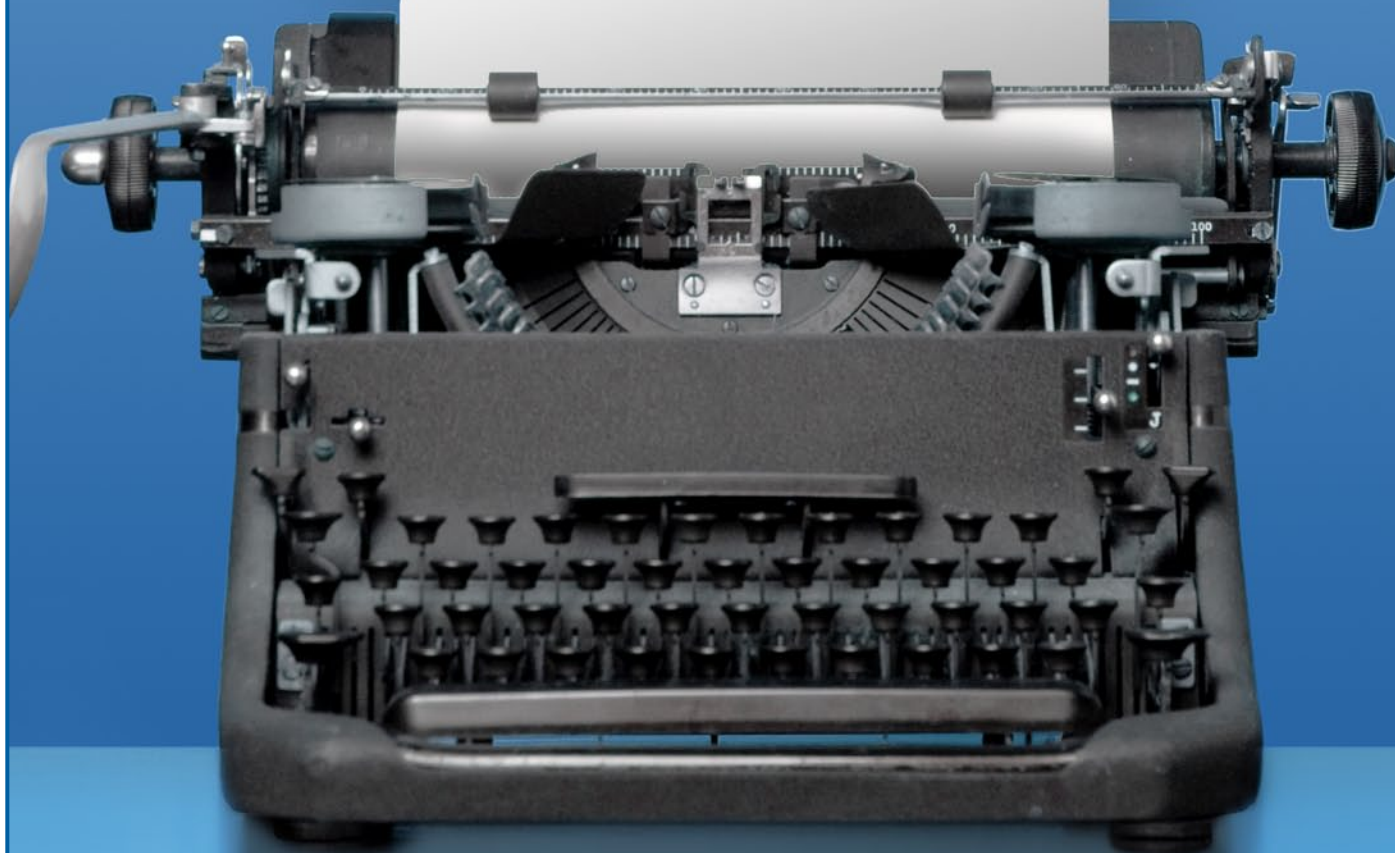
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The CDC Correspondence Manual



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention

THE CDC CORRESPONDENCE MANUAL

March 2012



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention

The CDC Correspondence Manual is a reference tool designed to help you create letters and memoranda (memos) that are clear, well written, and formatted according to CDC guidelines. This manual connects you to free web resources, checklists, and tips to make your writing process easier. We welcome your input, and will consider it for future editions of the manual. Please share comments or suggestions with Erika Jermé at vjh2@cdc.gov.

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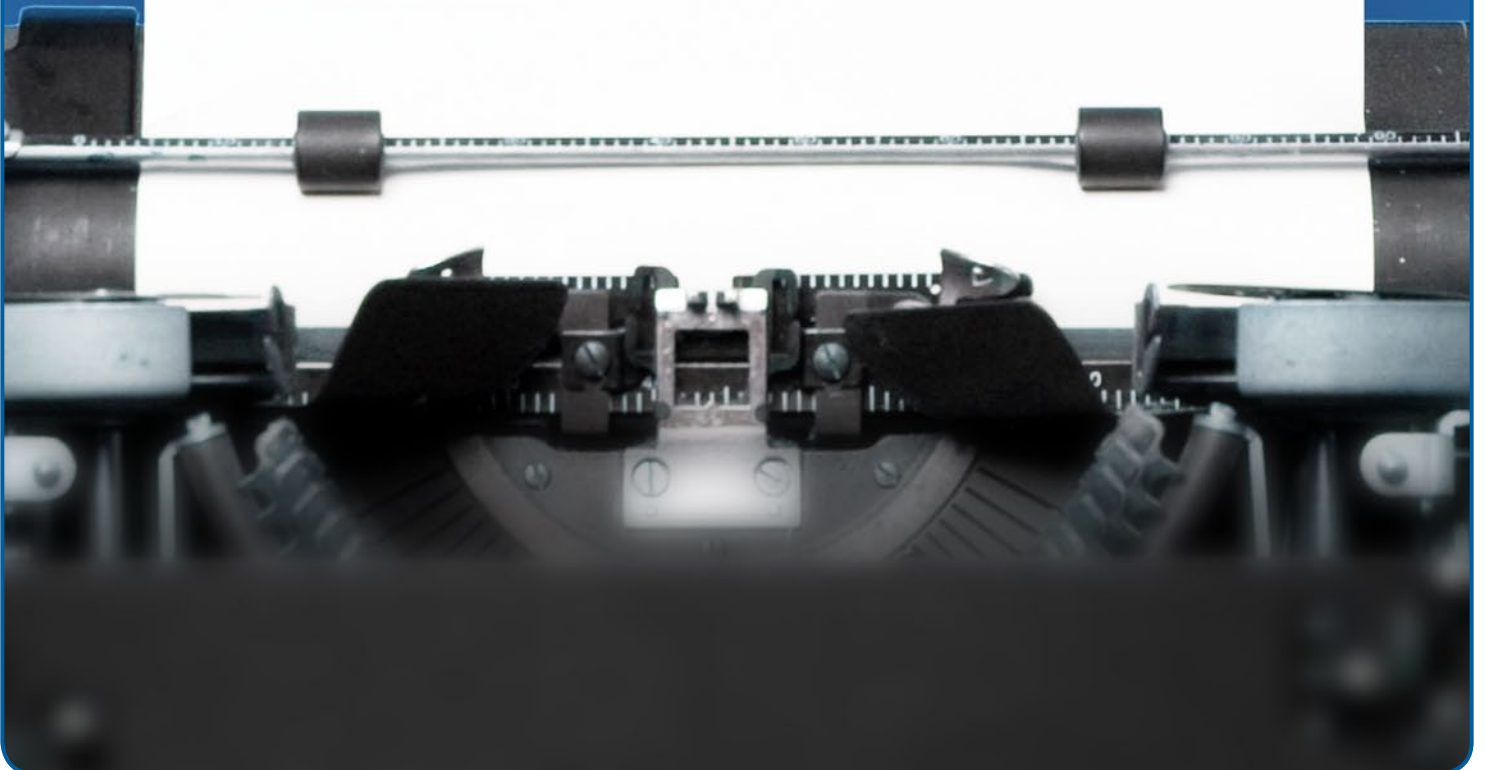
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SECTION I: WRITING EFFECTIVELY

Section I discusses the unique features of business writing. It also presents the elements of good writing and explains how to write more clearly while answering the following questions:

- Why is letter-writing important?
- How can I write more clearly?
- What is plain language and why should I use it?
- Where can I get additional help with my writing?



INTRODUCTION

Why is letter-writing important?

CDC's Office of the Director receives between 2,500 and 4,000 letters and e-mails annually from policy makers, state and local health departments, partners, researchers, and ordinary citizens. Events over the past decade—including the September 11 terrorist attacks, the adoption of the Affordable Care Act, the SARS and H1N1 pandemics, and the recent budget cuts—have increased CDC's public profile. As a result, we receive correspondence from diverse audiences, often on highly technical issues for which the science is still evolving and the political implications are significant. Letters are often the first line of contact between our agency and our constituents, and directly represent the voice of CDC; therefore, these letters need to be well written and to accurately reflect the agency's mission. In addition, letters must be responsive to the concern of the correspondent and be written in a tone that makes the reader feel heard.

The individual's whole experience is built upon the plan of his language.

- Henri Delacroix

How Can I Write More Clearly?

The scientific and medical topics CDC covers are often highly technical and complex. Expressing these concepts in language that is understood by everyone without sacrificing accuracy can be particularly difficult.

You can create clear, simple, and accurate correspondence by applying the concepts of plain language to your writing.

What is Plain Language and Why Should I Use It?

The Plain Language Act of 2010 (H.R. 946 [111th]) states that “writing should be clear, concise, well-organized and [follow] other best practices appropriate to the subject or field and intended audience.” For more on federal plain language standards, visit www.plainlanguage.gov/.

Writing in plain language means creating a document that is visually appealing, logically organized, and understandable the first time it is read. A plain language document presents the information in the simplest, clearest way, and leaves no room for misinterpretation by the reader.

The CDC Correspondence Manual will help you meet the federal mandate of plain language in government writing. You will learn how to write clear and effective letters and memos by using the appropriate style, tone, and format.

Where Can I Get Additional Help with My Writing?

Other reference tools are available to help you improve your writing skills. For example, the *Chicago Manual of Style, 16th Edition* answers questions about grammar, style, punctuation, preferred word usage, and citation styles.

LETTER OR MEMO?

Letters and memos are separate forms of correspondence. They serve different purposes and should not be used interchangeably. A letter is formal correspondence sent outside the agency. A memo is an informal letter distributed within the agency.

WRITING RESOURCES ON THE WEB

- *CDC Correspondence Manual*: http://intranet.cdc.gov/od/ocs/docs/CDC_Correspondence_Manual.pdf
- *The Chicago Manual of Style, 16th Edition*: www.chicagomanualofstyle.org/
- *Writing User-friendly Documents*: www.plainlanguage.gov
- *The Elements of Style*: www.bartleby.com/141/
- *The U.S. Government Printing Office Style Manual*: www.gpoaccess.gov/stylemanual/browse.html

CHAPTER 1: THE ELEMENTS OF GOOD WRITING

Writing clearly can be challenging at CDC because of our need to convey highly technical information about government rules and regulations, as well as complex medical and scientific concepts.

Fortunately, writing clearly is a skill you can learn through practice and by following the rules in this chapter.

Words of imagination should be written in very plain language; the more purely imaginative they are the more necessary it is to be plain.

- Samuel Taylor Coleridge

Assessing Readability

Ideally, you should aim your writing for a reading level of 6th grade or less, although this level might be hard to achieve. Writing to this level does not make the reading simplistic, just refreshingly clear.

To assess the readability of your document, use the following tests:

- *The SMOG readability formula*, available at <http://intranet.cdc.gov/od/oads/osi/hrpo/guides/consent/smog.htm>.
- *The Flesch-Kincaid Grade Level Index*, a *Word 2010* option that automatically computes the reading level of your document.

ACTIVATING THE FLESCH-KINCAID GRADE LEVEL INDEX IN WORD 2010

1. From the **Review** Button in the top right side of your toolbar, select **Spelling and Grammar**, select **Options** and then select **Spelling & Grammar**.
2. In the section “**When correcting spelling and grammar in Word**” section, check the **Show readability statistics** box.
3. Click **OK**.
4. The readability statistics will show up automatically after the spell check is complete.

The Four Rules of Good Writing

BE CORRECT

Good writing is error-free and grammatically and stylistically correct. Incorrect grammar, confusing punctuation, erratic spelling, and awkward sentence construction will impede understanding, slow the reading process, and make your writing look careless and unprofessional. For a list of words that convey proper usage versus common usage, consult the *Chicago Manual of Style*, Chapter 5: Grammar and Usage, www.chicagomanualofstyle.org/16/ch05/ch05_sec220.html. You may also consult the “One word or two?” list in [Appendix A](#) for more commonly misspelled words.

BE PRECISE

Good writing is also precise and accurate. Using the correct words is especially important in the medical and scientific arenas. Your words can leave no room for error, ambiguity, or misinterpretation. Be sure to use the right word every time. Many of the challenges writers and editors experience relate to usage—or

the collective habits of a language’s native speakers. For a list of commonly misused words, consult the *Chicago Manual of Style*, Chapter 5: Grammar and Usage, www.chicagomanualofstyle.org/16/ch05/ch05_sec220.html.

BE CLEAR

Good writing is clear writing. If you want your message to be understood easily, choose simple, plain words whenever possible, instead of complicated ones. For a list of jargon and preferred alternatives, consult [Appendix B](#).

BE CONCISE

William Strunk, Jr., captured the essence of good writing when he said, “Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.” For a list of unnecessary words and their preferred alternatives, consult [Appendix C](#).





Suggested Language

The following table lists suggested sentences to use in correspondence.

IF...	THEN WRITE...
This is the opening sentence...	Thank you for your letter regarding... [*]
This is the opening sentence for a letter sent by a member of Congress on behalf of a constituent...	Thank you for your letter on behalf of your constituent, Mr. William Marsh, regarding...
This is the opening sentence for a referral by HHS Secretary...	On behalf of Secretary [last name], thank you for your letter regarding....
This is the closing sentence (use whichever is appropriate)...	<ul style="list-style-type: none"> • Please contact [name] if you have any further questions. • I look forward to working with you on this issue. • Please feel free to contact me or my staff if we can be of further assistance.
The incoming letter was cosigned by more than one person...	This response is also being sent to the cosigner of your letter, Dr. [last name]. [†]
The incoming letter requests the answer be mailed to congressional member's district office...	A copy of this correspondence is being mailed to your Washington office. [†]

^{*}Do not use this opening for a "bad news letter." See "[Indirect approach](#)" (page 28) for more details on how to word the opening.

[†]This should be the last sentence in the letter.

WRITING TIPS

These tips are adapted from the *Elements of Style* by Strunk and White and are discussed in further detail in the next chapter and throughout this manual.

Before You Write

- Analyze your audience.
- Identify your audience's interests, education level, and other specifics.

While You Write

- Use the active voice whenever possible (*I sent the letter*, not *the letter was sent*).
- Avoid expletives (*there is*, *there are*, *it is*).
- Use positive terms and avoid negatives (*unable*, instead of *not able*).
- Use verbs instead of nouns (*announce*, not *make an announcement*).
- Use simple verb tenses (*will help*, not *will be helping*).
- Use personal pronouns (*I*, *you*, *we*).
- Treat one idea per paragraph, and write short paragraphs.
- Vary sentence length to avoid monotony.
- Omit unnecessary words (*because*, not *due to the fact that*).
- Be consistent in word use. If you call it a *widget* once, call it a *widget* throughout.
- Use simple words (*we used*, not *we utilized*), and avoid jargon, archaic words, and buzz words (*aspect*, *idea*, *absolutely*, *very*, *really*).
- Use bulleted or numbered lists.
- Avoid using too many capitals.

After You Write

- Use good design and layout.
- Insert plenty of white space.

CHAPTER 2: WRITING CLEARLY

Your challenge is to write in simple terms without being simplistic or sacrificing accuracy.

The following are guidelines to help you write using plain and accurate language. For more on plain language, visit www.plainlanguage.gov.

Take advantage of every opportunity to practice your communication skills so that when important occasions arise, you will have the gift, the style, the sharpness, the clarity, and the emotions to affect other people.

- Jim Rohn

Use the Active Voice and Avoid the Passive Voice

A verb is in the active voice when the performer of the act is the subject of the sentence. A verb is in the passive voice when the performer of the act is the object of the sentence.

Active voice: The agency is releasing the report.

Passive voice: The report is being released by the agency.

As a rule, it is better to use the active voice. The active voice is more accurate, direct, precise, and interesting. It is also shorter and easier to read, and it flows better. The passive voice is generally more obscure, vague, and stilted than the active voice. Ideally, 80 to 90 percent of your sentences should be in the active voice. The passive voice is preferred only when:

- The subject is unknown.
Example: A copy was circulated in the office.
- The subject is irrelevant to the matter or obvious.
Example: The results are being analyzed right now.
- The emphasis needs to be on the object, not the subject.
Example: Polio was eliminated in the Americas in 1997.
- The subject is better left unspoken.
Example: Errors were made in the report (you don't want to name the person responsible for the errors).

Avoid Expletives

The word *expletive* has a few meanings, and does not always refer to “bad language.” The words *there is*, *there are*, and *it is* are also called expletives. Starting a sentence with an expletive often results in unnecessary verbiage. To be clear and concise, avoid using expletives.

Avoid: There is evidence to suggest that stress causes many health problems.

Use: Evidence suggests that stress causes many health problems.

Avoid: It is often difficult to find links between diseases and the environment.

Use: Finding links between diseases and the environment is often difficult.

Put Statements in a Positive Form

Because people respond better to positive statements, always accentuate the positive and avoid negative statements. Bad news, especially, should be conveyed in a tactful manner. Avoid words such as *not*, *cannot*, *not possible*, *prohibit*, *refuse*, and *deny*. If you must use negatives, introduce them with words such as these:

- Unfortunately...
- We regret that...
- We are sorry...

You can rephrase many negative statements in a more positive way.

Avoid: We are **not able** to provide a response before August.

Acceptable: We are **unable** to provide a response before August.

Better: We will release the results in August.

Use Verbs and Avoid Nominalization

Nominalization is the use of nouns instead of verbs. Verbs are clearer and denote actions, whereas nouns derived from verbs are abstract, vague, and may weaken your point. Nouns derived from verbs are easy to spot: they usually end in *-ance*, *-ment*, and *-ion*. The sentence can often be changed to the verb form of the noun.

Avoid: CDC provided funding for the **expansion** of the program.

Use: CDC provided funding to **expand** the program.

Avoid: The committee will **make a decision** on the matter next week.

Use: The committee will **decide** on the matter next week.





Use Simple Verb Tenses

Avoid: After **having considered** all options carefully, we **have changed** the meeting location.

Acceptable: After **considering** all options carefully, we **changed** the meeting location.

Better: After **careful consideration**, we **changed** the meeting location.

Use Personal Pronouns and Focus on the Reader

A letter is a formal, written communication from one person to another person. Even if you are writing on behalf of the agency, approach the writing process as if you personally are writing the letter to another person. Use this approach even if your letter is to a group of people. To achieve this effect, use pronouns (e.g., I, we, you), which personalize the letter by turning inanimate objects or anonymous entities into real people. Address the reader as *you*, the writer as *I*, and the agency as *we*. Also consider using the possessive forms of these pronouns (such as the adjective *our*).

Avoid: The **agency** will release the findings on **the** website.

Use: We will release the findings on **our** website.

Also, try to write from the perspective of the reader, not yourself.

Writer's perspective: We have posted the guidelines on our website.

Reader's perspective: **You** can find the guidelines on our website.

Treat One Topic per Paragraph

If possible, introduce the paragraph with a topic sentence, which describes what will be said in the paragraph. In addition, try to compose short paragraphs. One-sentence paragraphs are perfectly acceptable. Paragraphs longer than 10 lines are hard to absorb and require more of the reader's concentration.

Vary Sentence Length

Try to vary the length of your sentences to help delineate your ideas and keep your reader's interest. Sentences that are all the same length are monotonous, sentences that are too short produce a choppy effect, and sentences that are too long are hard to follow.

Beware of Wordiness

Effective writing is concise and to the point. Use the minimum number of words for the maximum effect. One key is to use strong verbs in the active voice and to limit your use of nouns, adverbs, adjectives, and jargon. However, be careful to still maintain an appropriate tone.

Weak: It is very important that we consider each and every alternative.

Better: We must consider all alternatives.

Weak: A considerable number of people are utilizing the test at this time.

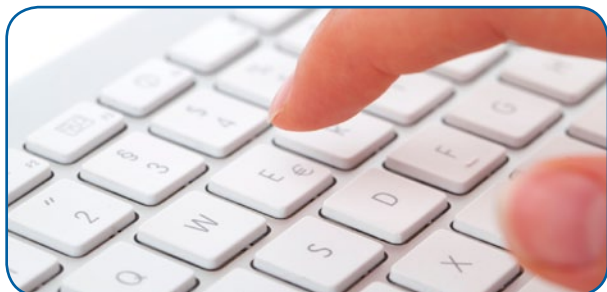
Better: Many people use the test now.

Use Words Consistently

In general, if you refer to something as a *widget* the first time, call it a *widget* all the way through. This practice will avoid confusion. However, it does not mean that you should never use synonyms; just be sure the reader knows that the two terms refer to the same thing.

Avoid Jargon, Technical Terms, and Pompous-sounding Words

Simple words are usually preferable to complicated ones. The key is to adapt your writing to the reader. Only use jargon if the reader uses the same jargon and will understand it. Also, if you need to use technical terms for a lay audience, be sure to explain the terms. You can find a list of jargon and alternative words in [Appendix B](#).



Use Lists

If the letter is lengthy, consider presenting some of the information in bulleted or numbered lists. Lists help highlight the information and speed up the reading process. The following guidelines will help you maximize the effectiveness of lists.

BULLETS OR NUMBERS?

Use numbered lists only if a hierarchy or steps are involved (e.g., step-by-step instructions on how to do something). Otherwise, use bullets.

IF YOU USE BULLETS, USE THE CORRECT ONES

Use appropriately sized and shaped bullets. If the bullets are unfamiliar or too big, they will distract from your content. Also, only use lists if you have at least two, and preferably three or more, items.

INTRODUCE THE LIST AND MAKE IT PARALLEL

An introductory statement should precede a list. In addition, the listed items must be parallel in structure, meaning the first item in all the bullets must be in the same grammatical category.

NOT PARALLEL

A healthy lifestyle includes the following:

- Eating well-balanced meals.
- Avoidance of all sweets.
- Exercise every day.
- Getting plenty of rest.

PARALLEL

A healthy lifestyle includes the following:

- Eat well-balanced meals.
- Avoid all sweets.
- Exercise every day.
- Get plenty of rest.

PUNCTUATE ACCORDING TO CDC STYLE

How to punctuate lists is largely governed by convention, not by set rules. Therefore, the rules vary depending on which manual you consult. The most important rule is to use sound judgment and be consistent throughout the document.

If the introductory statement uses words such as *the following* or *these*, insert a colon at the end of the statement (see example 1 below); otherwise, do not use any punctuation (see example 2 below). Capitalize the first word in each bullet, and insert a period after the last word in each bullet. However, if each list consists of only one or two words, consider omitting the periods (see example 2 below).

Following are two examples of how to punctuate lists.

EXAMPLE 1

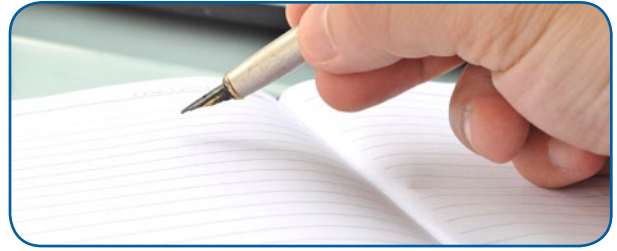
A healthy lifestyle includes the following behaviors:

- **Eating** well-balanced meals.
 - **Avoiding** all sweets.
 - **Exercising** every day.
 - **Getting** plenty of rest.
- ✓ *Insert a colon after the introductory expression.*
- ✓ *Capitalize the first word in each list.*
- ✓ *Insert a period at the end of each item.*

EXAMPLE 2

A healthy lifestyle includes

- **Eating** well
 - **Avoiding** sweets
 - **Exercising**
 - **Resting**
- ✓ *Do not insert a punctuation mark after the verb.*



A Note about Commas

Many writers have strong feelings about the use of commas. CDC uses the serial (or Oxford) comma; that is, when a conjunction separates the last two items in a series, a comma precedes the conjunction. The serial comma helps to ensure clarity.

Example: Risk factors include poor diet, tobacco use, and high blood pressure.

Tautologies and Redundancies

A tautology is a needless repetition of a word, idea, or statement, such as in “Five minutes before he died, he was still alive.” Although this is an extreme example, we use many other tautologies without even realizing it. As Thomas Jefferson said, “The most valuable of talents is that of never using two words when one will do.” See the table of tautologies and their alternatives in [Appendix C](#).

Beware of “Alphabet Soup”

Government prose is rife with acronyms and abbreviations, and overuse may lead to an “alphabet soup.” Therefore, use them wisely. The following two sections provide more information on acronyms and abbreviations.

ACRONYMS AND ABBREVIATIONS FINDER

For a list of acronyms and abbreviations, see www.acronymfinder.com.

Acronyms

For clarity, always spell out the term the first time it appears in a document, followed by the acronym in parentheses. After that, use the acronym.

Example: Thank you for your letter to the Centers for Disease Control and Prevention (CDC) concerning influenza. Please visit our website for information and updates on the disease.

Abbreviations

Use abbreviations sparingly in letters, and insert a period after most abbreviations.

Example: Prof. Xavier will attend the meeting.

Web Addresses

Start the address with *www*. Only use the protocol *http://* if there is no *www* in the address (in the case of an intranet address, for example). Do not underline or italicize the address (see instructions in the box below on how to remove the hyperlink).

Incorrect:

Consult the CDC website at *http://www.cdc.gov*.

Correct:

Consult the CDC website at *www.cdc.gov*.

If possible, keep the address on one line.

REMOVING THE HYPERLINK IN WORD 2010

1. Highlight the hyperlinked address.
2. Right-click the mouse.
3. Select **Remove hyperlink**.

Symbols

Do not use mathematical symbols (+, =, >, %) in the body of letters.

Avoid: Approximately 20% of those infected develop a fever.

Use: Approximately 20 percent of those infected develop a fever.

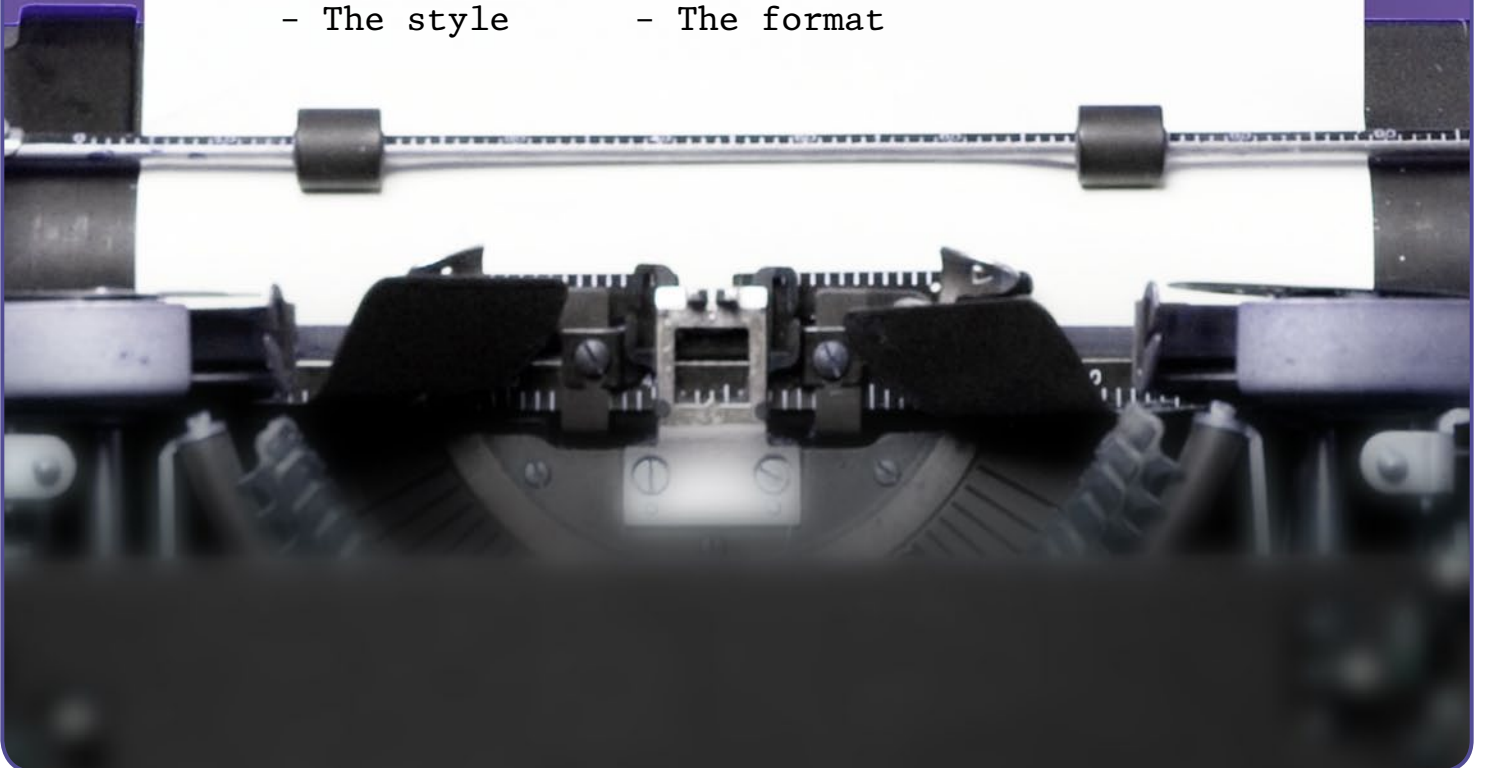


SECTION II: WRITING LETTERS

Section II presents specific guidelines for crafting letters that will address the needs of the target audience. It discusses how to develop the content of the letter and how to use the appropriate style and tone. This section also outlines the formatting guidelines for CDC letters. For a checklist of considerations for writing a letter, skip to [Appendix D](#).

In this section you will learn how to decide on the following:

- The content
- The tone
- The style
- The format



CHAPTER 3: DECIDING ON THE CONTENT

Before you start writing the letter, you need to decide its purpose (why you are writing it) and analyze the audience (who your reader is). Understanding the purpose and the audience ensures that you develop adequate, appropriate content.

To effectively communicate, we must realize that we are all different in the way we perceive the world and use the understanding as a guide to our communication with others.

- Anthony Robbins

Purpose of the Letter

Analyzing the purpose of the letter helps you focus on the issue and identify your key message, thus ensuring that your message is on target. Ask yourself, “Why am I writing?” You may write for these reasons:

- To ask for information
- To convey information
- To answer a query
- To approve or deny a request
- To send a referral to someone

Keep in mind that sometimes you may write for more than one purpose. In addition, you need to find out why the correspondent contacted the agency. Knowing this information helps ensure that you craft an appropriate response. Ask yourself, “What does the correspondent want?” The correspondent may write for these reasons:

- To send information
- To request information or action
- To invite someone to an event

Audience Analysis

Understanding your reader’s background helps you write a response that the reader will understand. It also ensures that your message will be read in its entirety and interpreted correctly. Ask yourself, “Who is my audience?” The reader may be one of these:

- Member of Congress or another politician
- Member of the public
- Person from another agency (local, state, or federal)
- Interest or advocacy group (nonprofit, industry)

Knowing the reader's background and level of expertise in the subject matter helps you tailor the language to the audience. For example, if the reader is a physician, you probably can use scientific and medical terminology without having to add lengthy explanations. However, if the reader is a member of the public, you might need to use simpler terms and explain unfamiliar concepts. In general, no matter who your reader is, it is best to write in plain language.

After you have identified the audience and decided on the information you want to convey, you need to present it clearly and accurately. The next chapters will guide you through the process of organizing and presenting content.

AS YOU COMPOSE THE LETTER, ASK YOURSELF THESE QUESTIONS:

- Who is the reader?
- What does the reader need or want?
- Why am I writing this letter?
- What is my key message?
- Am I conveying my message accurately?
- Will the reader immediately understand my message?
- Can I summarize my point in a few short and precise sentences?
- Can I express myself more clearly?
- Am I using the right words?
- Have I included all the necessary elements?

CHAPTER 4: STYLE

Style refers to the manner in which writers express themselves through word choice and sentence construction. Style is the individual use of language that makes the content unique. In essence, style is concerned with the form rather than the substance of the message.

To get your message across and achieve maximum impact, your letter needs to be clear, concise, and written in the appropriate style. The style of the letter depends on the message you need to convey. Neutral or good news is generally best delivered directly, and bad news is best delivered indirectly.

Have something to say and say it as clearly as you can.

That is the only secret of style.

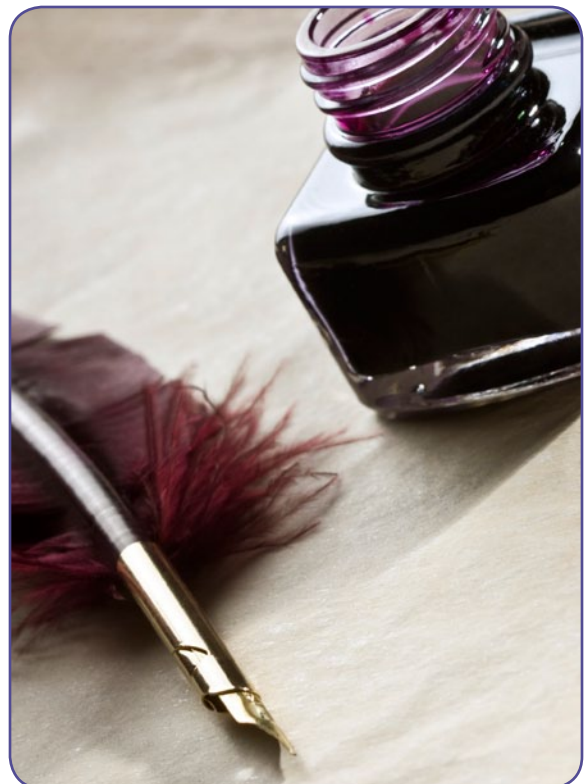
- Matthew Arnold

Direct Approach

The direct approach is the most efficient way to communicate, and this type of letter is the easiest to write. However, you should only use the direct approach if you know the reader will respond well to the letter. If the letter delivers good news, place the good news in the opening paragraph.

The direct approach typically contains the following elements:

- 1. Opening Paragraph.** If the letter presents very good news, place it here.
- 2. Main Point of the Letter.**
- 3. Closing Paragraph.** If it is a good-news letter, reiterate the good news here.



Following is an example of a direct-approach letter.

March 1, 2011

Mr. Aaron S. Williams
Director, Peace Corps
Paul D. Coverdell Peace Corps Headquarters
1111 20th Street, NW
Washington, DC 20526

Dear Mr. Williams:

Congratulations on the 50th anniversary of President Kennedy's executive order that created the Peace Corps. To date, over 200,000 volunteers have served in 139 countries, a significant accomplishment.

The Peace Corps and the Centers for Disease Control and Prevention (CDC) share a common goal of working to solve global public health problems. Programs such as the President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Health Initiative (GHI) illustrate opportunities for CDC and Peace Corps to collaborate toward this end. Many of our employees themselves served as Peace Corps Volunteers, and credit the experience for sparking their careers in public health. We recognize the valuable breadth of experience Returned Peace Corps Volunteers bring to our organization, and are proud to actively recruit these individuals.

I applaud the work of the Peace Corps to promote peace and friendship around the world, and extend my best wishes for a memorable anniversary celebration.

Sincerely,

Thomas R. Frieden, MD, MPH
Director, CDC, and
Administrator, Agency for Toxic
Substances and Diseases Registry

Indirect Approach: How to Deliver Bad News

The indirect approach is harder to write. Use it to deliver bad news or if you know the reader will be hostile or resistant to your message.

Following are three factors to consider when crafting an indirect-approach letter.

STRESS THE POSITIVE

Stress the positive and avoid using negative terms, if possible. Many times, you can rephrase negative statements in positive terms.

Avoid: After reviewing the data on the potential health threats of the site, researchers concluded that the site does not pose a danger to the public.

Use: Researchers have reviewed the data on the potential health threats of the site. They have concluded that the site is safe for public use.

If you must use negative statements, preface them with words like these:

- Unfortunately...
- We regret that...
- We are sorry...

Avoid: We did not receive your application before the deadline.

Use: Unfortunately, we did not receive your application before the deadline.

Better: Unfortunately, we received your application after the deadline.

USE A BUFFER

Before addressing the main point of your letter, you need a buffer, a sentence or paragraph that shows you are sympathetic to the reader's cause or request. The buffer will ease the bad news, add perspective, and establish goodwill between the writer and the reader. However, do not bury, hide, or coat the bad news.

In the buffer, use terms that show you empathize with the reader's situation. Using a buffer does not mean that you necessarily have to agree with the reader's view.

Suggested terms include the following:

- I share your concern about...
- I understand that...
- I realize that...

CONTENTS OF AN INDIRECT-APPROACH LETTER

The indirect approach model usually contains the six following elements:

1. OPENING PARAGRAPH.

Avoid using the words *thank you* in the opening of a bad-news letter.

Avoid: Thank you for your letter complaining about the interim report.

Use: I appreciate your letter concerning the interim report.

2. BUFFER.

Show you understand the reader's perspective.

Example: I share your concern about the accuracy of the interim report.

3. PROCEDURE.

Show that you have examined all sides. Explain agency processes, if appropriate.

Example: I want to assure you that we have analyzed all the data in the interim report.

4. MAIN POINT.

This is where you present the bad news in a courteous, civil manner. If possible, avoid using negative terms.

Avoid: At this time, we cannot release an interim report.

Use: At this time, we are unable to release an interim report.

If possible, explain the reason you cannot fulfill the reader's request.

Example: Because we remain committed to science-based public health, it would be premature to release results that have not been verified through significant research or evaluation.

5. ACTION (IF APPROPRIATE).

This is where you mention future steps.

Example: We are working to complete the report as quickly as possible. Once we receive the needed records, we expect to publish the final report.

6. CLOSING PARAGRAPH.

Thank the reader for the input.

Example: Thank you for your interest in this important public health issue. I hope the enclosed information is useful.

The following table lists the differences between the direct and the indirect approach.

DIRECT APPROACH	INDIRECT APPROACH
The letter is easier to write.	The letter is harder to write.
Use this style to deliver neutral or good news.	Use this style to deliver bad news or to respond to a criticism or a complaint.
Start with <i>Thank you for your letter concerning...</i>	Start with <i>I appreciate your letter concerning...</i>
Deliver the main point in a direct, straightforward manner.	Use a buffer before delivering the main point. In the buffer paragraph, show empathy and acknowledge the reader's perspective.

Following is an example of an indirect-approach letter.

Dear Colleague:

Public health has been hit hard as a result of the recession, and budget cuts are straining the capacity of health departments across the country. I know that you are under tremendous pressure from the cumulative effect of state budget cuts and that the recent federal budget cuts further increase that pressure.

These abrupt cuts force difficult and painful decisions, and federal reductions could hardly come at a worse time. Many of you have seen measurable improvements in health in your states due to programs that are now being curtailed or eliminated.

The Centers for Disease Control and Prevention's (CDC) fiscal year (FY) 2011 budget was cut \$740 million from the previous year, making this our lowest budget authority since FY 2003. Congress will undoubtedly consider significant additional budget cuts in FY 2012 and FY 2013. It has been agonizing for me to manage these cuts. Virtually every CDC-funded program has been affected, and we are cutting our internal costs to maximize program support. We are also seeking ways to maximize our support for our public health partners in the field.

I look forward to speaking with you soon about ways we can mitigate the impact of budget cuts on the public's health. Thank you for all of your hard work in meeting our shared goal of protecting and improving the nation's health.

Sincerely,

Thomas R. Frieden, MD, MPH
Director, CDC, and
Administrator, Agency for Toxic
Substances and Disease Registry



CHAPTER 5: TONE

Tone refers to the particular style of writing that reflects the writer's feelings toward the issue and the reader. Tone is the way the letter "sounds" and comes across to the reader.

Tone is an often-neglected but crucial element of a letter: it is what the reader responds to first. The tone of the letter leaves a certain impression of the agency, and you want that impression to be positive, regardless of the type of news you deliver. Remember, how you say it is as important as what you say.

Correspondence should be polite, informative, and courteous. It should never be condescending, rude, or sarcastic. Government prose has been criticized for being rigid and bureaucratic. Your goal is to be professional without sounding too formal. Put yourself in the reader's place: would you enjoy receiving a stilted letter that starts with *Enclosed herewith, please find...*? However, be careful not to go to the other extreme; there is a fine line between approachable and familiar. Below are a few guidelines to help you use the right tone.

In a writer there must always be two people—the writer and the critic.

—Leo Tolstoy

Personal Pronouns

Use personal pronouns (e.g., I, we, you). These pronouns personalize the letter by turning inanimate objects or anonymous entities (e.g., the agency) into real people (e.g., I, we). In addition, pronouns save space and increase reading speed. Refer to the reader as *you*, the writer as *I*, and the agency as *we*. Also, consider using the possessive forms of these pronouns (such as the adjective *our*).

Avoid: The **agency** will investigate the matter and inform **the public** about **the findings**.

Use: **We** will investigate the matter and keep **you** informed about **our** findings.

You can increase the use of personal pronouns by using the active voice instead of the passive voice.

Avoid: Information about the condition can be found on the website.

Use: **You** can find information about the condition on **our** website.

Note: Be careful to avoid overuse of the personal pronoun "I."

Reader Emphasis

Write with the reader's perspective in mind (instead of your own), and stress the benefit to the reader. Try to use *you* more often than *I* or *we*.

Avoid: **I** will send you the report as soon as it is available.

Use: **You** will receive the report as soon as it is available.

Contractions

Because they are too familiar, do not use contractions (use *I am* instead of *I'm*, *we will* instead of *we'll*).

Inclusive Language

A respectful tone is free of biased and discriminatory language. To ensure the use of inclusive language, be careful when referring to gender, age, race, or ethnicity. In addition, use gender-neutral terminology. See “Bias-Free Language” (Chicago Manual of Style 5.221–5.230, www.chicagomanualofstyle.org/16/ch05/ch05_sec221.html) for more details. In addition, the federal government uses standard language to identify racial and ethnic groups (www.whitehouse.gov/omb/fedreg_1997standards).



Following is a short list of common gender-neutral terms:

Avoid	Use
chairman, chairwoman	chair, chairperson
congressman	member of Congress, representative, legislator
spokesman, spokeswoman	spokesperson

Bad News

When delivering bad news, buffer it with a sentence or paragraph that shows compassion. For more on this, see “Indirect Approach,” in [Chapter 4](#).

Courtesy

When answering criticism, resist the temptation to snap back. Always keep a civil and courteous tone. Avoid the following terms, which may come across as impatient, condescending, or presumptuous:

- As I told you before...
- As you are well aware...
- As you well know...
- I am sure you will agree...
- For your information...

Apology

If you must apologize, do it completely, and do not blame the correspondent.

Avoid: I apologize for the late response, but we received your application after the deadline because you did not include the correct mailstop.

Use: I apologize for the delay.

If you want to include an explanation, phrase it in positive terms.

Example: For a prompt reply, please be sure to include the mailstop (ex: D-14) in the address.

In addition, use the active voice and assume responsibility for your mistakes.

Avoid: An error was made in the calculation.

Use: We made an error in the calculation. We apologize for any inconvenience this may have caused.

However, consider using the passive voice to avoid blaming or embarrassing someone.

Avoid: Because the Board of Directors canceled the meeting, we could not reach a consensus.

Use: Because the meeting was canceled, a consensus could not be reached.

Please and Thank You

Use *please* and *thank you*, when appropriate. However, using thank you in the opening of a letter is inappropriate when answering a complaint or writing a “bad news” letter. See “Indirect Approach,” [Chapter 4](#), for more details.

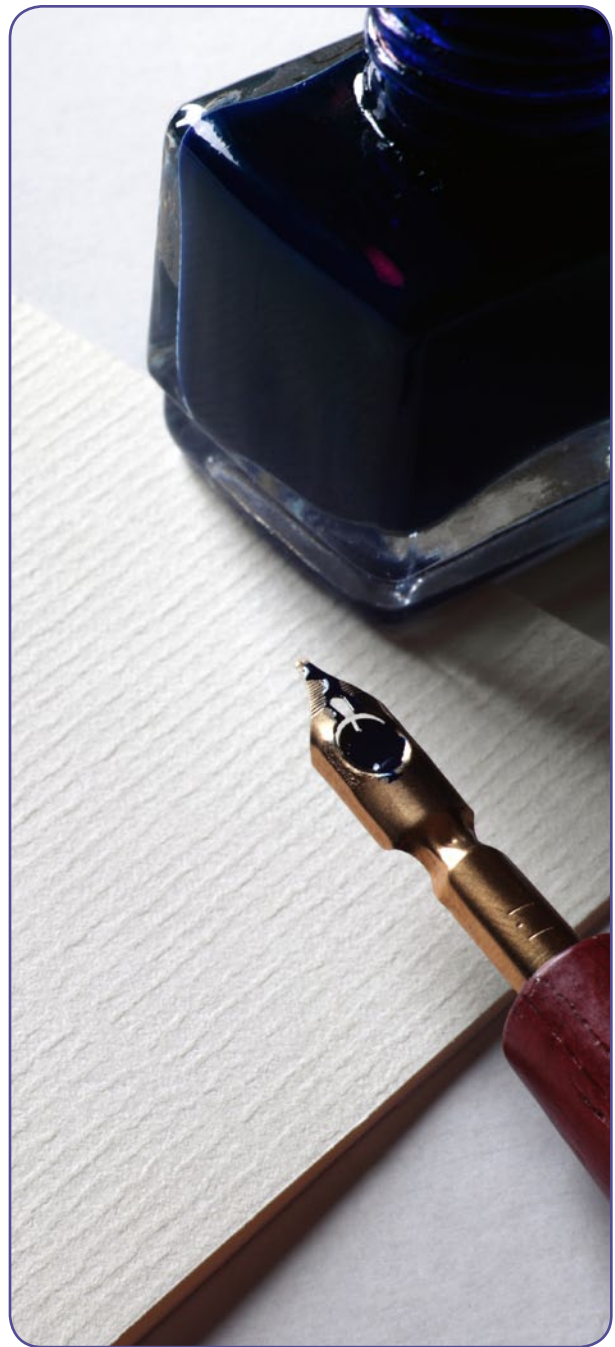
Avoid: Thank you for your complaint concerning the report.

Use: I appreciate your concerns about the report.

In addition, do not thank someone in advance for an action that has not yet been accomplished.

Avoid: Thank you in advance for your help.

Use: I look forward to hearing from you soon.



Thanking someone for a thank you letter may also pose difficulties.

Avoid: Thank you for your letter thanking me for speaking at the conference.

Use: I appreciate your letter thanking me for speaking at the conference.

CHAPTER 6: FORMAT

Format refers to the manner in which the information appears on the page. Proper formatting makes the document visually appealing and easy to read, follow, and understand.

This chapter explains the formatting guidelines for letters.* Following these CDC conventions ensures that our agency's identity and message are presented clearly and consistently throughout our correspondence.

*Formatting varies between letters and memos. Please consult Chapters 7 and 8 for specific memo formatting guidelines.

A journalist and an information architect face exactly the same problem – how to give shape to the pile of information in front of you in a way that will make it easy and natural for people to comprehend.

- Jesse James Garrett

Features of a Well-designed Document

A well-designed document should:

- Be visually appealing.
- Be clutter-free.
- Highlight the different sections clearly.
- Help readers find critical information quickly.
- Convey the agency's role, whether directly or indirectly.
- Give readers a favorable impression of the agency.

TO ENHANCE READABILITY

- Write short paragraphs.
- Create plenty of white space (use 1" margins, start on line 9, insert a blank line between paragraphs).
- Use bulleted or numbered lists, if appropriate.



Formatting Letters

The following table will help you format your letters.

TOPIC	FORMAT
Font	Use Times New Roman, point size 12. If size 12 does not fit, adjust margins or use size 11.5.
Justification (Text Alignment)	<ul style="list-style-type: none">• Align all text left, except for the signature block, which starts at 3" from the left margin.• Do not justify (make straight) the right margin.
Line Spacing	<ul style="list-style-type: none">• Draft: double space the lines.• Final: single space the lines.
Margins	Use 1" margins all around. Note that margins may be adjusted to keep correspondence to one page.
Address	<ul style="list-style-type: none">• Start the address on line 9 (at 2.5" from the top of the page).• Spell out the name of locators (e.g., Street, Avenue).• Spell out the state (<i>Georgia</i>, not <i>GA</i>).• Insert two spaces between the state and the zip code.
Page Numbers and Headers	<ul style="list-style-type: none">• Omit the page number from the first page.• At the top of each subsequent page, place a header with the same information that appears on the first line of the address. <p>Example: Page 2 – The Honorable Johnny Isakson</p> <p>Note: For instructions on creating a header, see Appendix E. For instructions on preparing correspondence signed by the HHS Secretary, see Chapter 8.</p>
Paragraphs	<ul style="list-style-type: none">• Do not indent paragraphs.• Insert a blank line between paragraphs.
Sentences	Insert one space after the period at the end of each sentence. Note: For instructions on setting the spacing, see Appendix E .
Enclosures	If appropriate, leave one blank line after the signature block and insert the word <i>Enclosure</i> or <i>Enclosures</i> . Be sure to mention the enclosure(s) in the body of the letter.

The following sample letter highlights formatting guidelines.
Consult **Appendix E** for tips on formatting documents using Word 2010.

Margins are 1 inch
all the way around.
The font is 12 point,
Times New Roman-

[SAMPLE LETTER]

December 5, 2011

The Honorable Marco Rubio
United States Senate
Washington, DC 20510

Keep the letter concise
and insert a blank line
between paragraphs.

Dear Senator Rubio:

Thank you so much for your inspiring remarks at the World AIDS Day event at George Washington University last Thursday. You spoke eloquently of the importance of global health and HIV programs both to the global economy and to the United States.

As you know, the Centers for Disease Control and Prevention (CDC) is a major implementing agency of the President's Emergency Plan for AIDS Relief (PEPFAR). We use the latest science and evidence to focus our global HIV/AIDS efforts on the most effective and cost-effective interventions. As we work to achieve an AIDS-free generation, your support is invaluable.

I would welcome the opportunity to meet with you in Washington, DC. My staff will contact your staff to offer additional information and assistance on these critical global health issues.

Sincerely,

If the CDC and ATSDR
acronyms are not
spelled out in the letter,
spell them out in the
signature block.

Thomas R. Frieden, MD, MPH,
Director, CDC, and
Administrator, Agency for Toxic
Substances and Disease Registry

Parts and Features of a Letter

A letter usually contains the following parts:

1. **Heading** (letterhead and date)
2. **Opening** (address and salutation)
3. **Body** (main text)
4. **Closing** (complimentary closing, signature block, and title)
5. **References** (enclosures, copy notations)

1. HEADING.

The heading contains the letterhead and the date.

Letterhead

- Use CDC letterhead for the first page of the letter.
- Use plain bond paper for additional pages.

Date

- The date goes on the right side, slightly under *Atlanta, Georgia 30333*.

2. OPENING.

The opening contains the correspondent's address and salutation. Start typing on line 9 (2.5" from the top of the page) of the first page.

Correspondent's Address

- Include degree(s) after the name, if appropriate.
- Spell out all locator words (e.g., Road, Suite, Georgia). However, note that PO Box is not written out.
- Abbreviate titles (e.g., Mr., Ms.), degrees (e.g., MD, MPH), and directions (e.g., NW, SE).
- Insert two spaces between the state and the zip code.

Salutation

- Use *Dear* followed by the appropriate salutation and a colon.

Examples: Dear Dr. McGraw:
Dear Mr. Marsh:

The following example details some formatting guidelines for addresses.

The diagram illustrates address formatting guidelines using an example address. The address is centered within a light blue rounded rectangle. Three callout boxes with arrows point to specific parts of the address:

- No periods with abbreviations**: Points to "MD, MPH" in "Robert Thomas, MD, MPH".
- Spell out location words**: Points to "New York" in "Long Island, New York 11122".
- Insert two spaces before Zip code**: Points to the space between "New York" and "11122".

The example address text is as follows:

Robert Thomas, MD, MPH
Deputy Director
Center for Global Change
1235 Parker Lane, NW, Suite 200
Long Island, New York 11122

The following tables present the correct way to address correspondents in the opening section of the letter.

LOCAL AND STATE GOVERNMENT OFFICIALS

PERSON	ADDRESS	SALUTATION
State Governor	The Honorable (full name) Governor of (State) (City, State, Zip)	Dear Governor (surname):
State Senator	The Honorable (full name) (State) Senate (City, State, Zip)	Dear Senator (surname):
State Representative	The Honorable (full name) (State) House of Representatives (City, State, Zip)	Dear Representative (surname):
Mayor	The Honorable (full name) Mayor of (City) (City, State, Zip)	Dear Mayor (surname):

FEDERAL GOVERNMENT OFFICIALS

PERSON	ADDRESS	SALUTATION
Cabinet Member	The Honorable (full name) Secretary of (Department) (address)	Dear Secretary (surname):
Senator (In Washington, DC)	The Honorable (full name) United States Senate Washington, DC 20510	Dear Senator (surname):
Senator (Local District/Office)	The Honorable (full name) United States Senator (address)	Dear Senator (surname):
Senator-elect	The Honorable (full name) United States Senator- elect (address, if given) <i>or</i> Care of the United States Senate Washington, DC 20510	Dear Senator-elect (surname):
Representative (In Washington, DC)	The Honorable (full name) US House of Representatives Washington, DC 20515	Dear Representative (surname):
Representative (Local District/Office)	The Honorable (full name) Member, US House of Representatives (address)	Dear Representative (surname):
Representative-elect	The Honorable (full name) Representative-elect (office address) <i>or</i> US House of Representatives Washington, DC 20515	Dear Representative-elect (surname):

UNIVERSITY DEGREE HOLDERS

PERSON	ADDRESS	SALUTATION
Physician	(full name), MD (address)	Dear Dr. (surname):
PhD Holder	(full name), PhD (address)	Dear Dr. (surname):
Professor	Professor (full name) Department of (name) (name of institution) (address)	Dear Professor (surname):

THESE REFERENCE MANUALS SHOW MORE SALUTATIONS:

- *Gregg Manual, 9th Edition* (pages 544–50)
- *United States Government Printing Office Style Manual 2008*, at www.gpoaccess.gov/stylemanual/browse.html

3. BODY.

The body contains the main idea or ideas you want your letter to convey. It typically has an opening paragraph, the main point(s) of the letter, and a closing paragraph. Highly technical or detailed information should be provided in an enclosure to keep the letter clear and concise.

Main Text

- Double space the lines in drafts.
- Single space the lines in final versions.

4. CLOSING.

This section contains the complimentary closing, signature, name, and job title of the writer. All text starts 3 inches (or 6 tabs) from the left margin.

Complimentary Closing

- Use *Sincerely* followed by a comma.

Signature

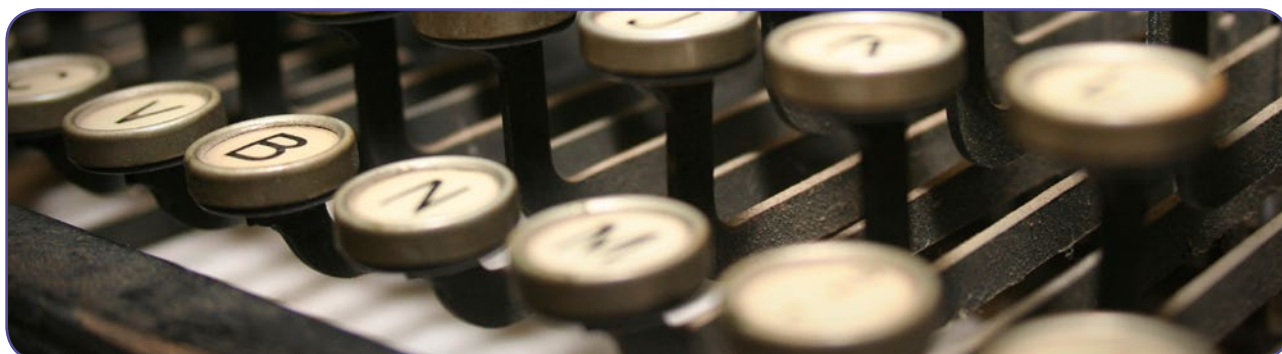
- Leave three blank lines for the signature of the CDC Director.
- Leave four blank lines for the signature of the HHS Secretary.

Writer's Name and Degree(s)

- Insert the writer's name and degree(s), if appropriate.

Writer's Job Title

- Insert the writer's job title right under the name (*Note:* do not insert the words HHS after the job title).



**THE SIGNATURE BLOCK FOR THE
CURRENT CDC DIRECTOR IS
AS FOLLOWS:**

Thomas R. Frieden, MD, MPH
Director, Centers for Disease Control
and Prevention, and
Administrator, Agency for Toxic
Substances and Disease Registry

When to Use Copy Notation

If you send a copy of the final letter to people *outside* of CDC, use copy notation (cc:). This notation will indicate to the correspondent that these individuals will also receive a copy.



**KEEP A COPY OF THE LETTER
FOR YOUR REFERENCE.**

5. REFERENCES.

The references contain enclosures, copy notations, and blind copy notations (if appropriate).

Enclosure(s)

- If other documents are enclosed with the letter, type the word *Enclosure* or *Enclosures*.
- Be sure to mention the enclosure(s) in the body of the letter.

ENCLOSURE OR ATTACHMENT?

- Insert the word *Enclosure* at the bottom of a letter.
- Insert the word *Attachment* at the bottom of a memo.

Copy Notation (cc:) and Blind Copy Notation (bcc:)

These indicate who will get a copy of the letter.

General Rule for Indicating Blind Copy Notation

Drafts sent to the Division of Executive Secretariat should have a “bcc:” listing all those inside the agency who will receive a copy of the letter. This internal copy notation also includes other information such as file name and name of preparer (see samples on the next page). Omit this internal information from the final version.



Following are two samples of internal copy notations.

SAMPLE 1: GENERAL CORRESPONDENCE

bcc:

OD [the Office of the Director always gets a copy]

CDC/W [for congressional correspondence, the Washington Office gets a copy]

FMO [FMO gets a copy]

NCEH [CIO preparing the response]

CDC ID: 12345; Doc. Name: pickaname.doc [tracking number provided by the Division of the Executive Secretariat, document name provided by the CIO]

Prepared by: LBell, ATSDR, (770) 488-4321 [first initial and last name of preparer, CIO, contact number]

Spelling verifier used by: BMarsh 11/27/11 [first initial and last name of person who spell-checked the letter, date prepared]

SAMPLE 2: CORRESPONDENCE FROM THE OFFICE OF THE SECRETARY (OS), EXECUTIVE SECRETARIAT (ES), HHS

bcc:

OD

OS/ES

NCHHSTP

OS No. 123456789

CDC ID: 12345; Doc. Name: pickaname.doc

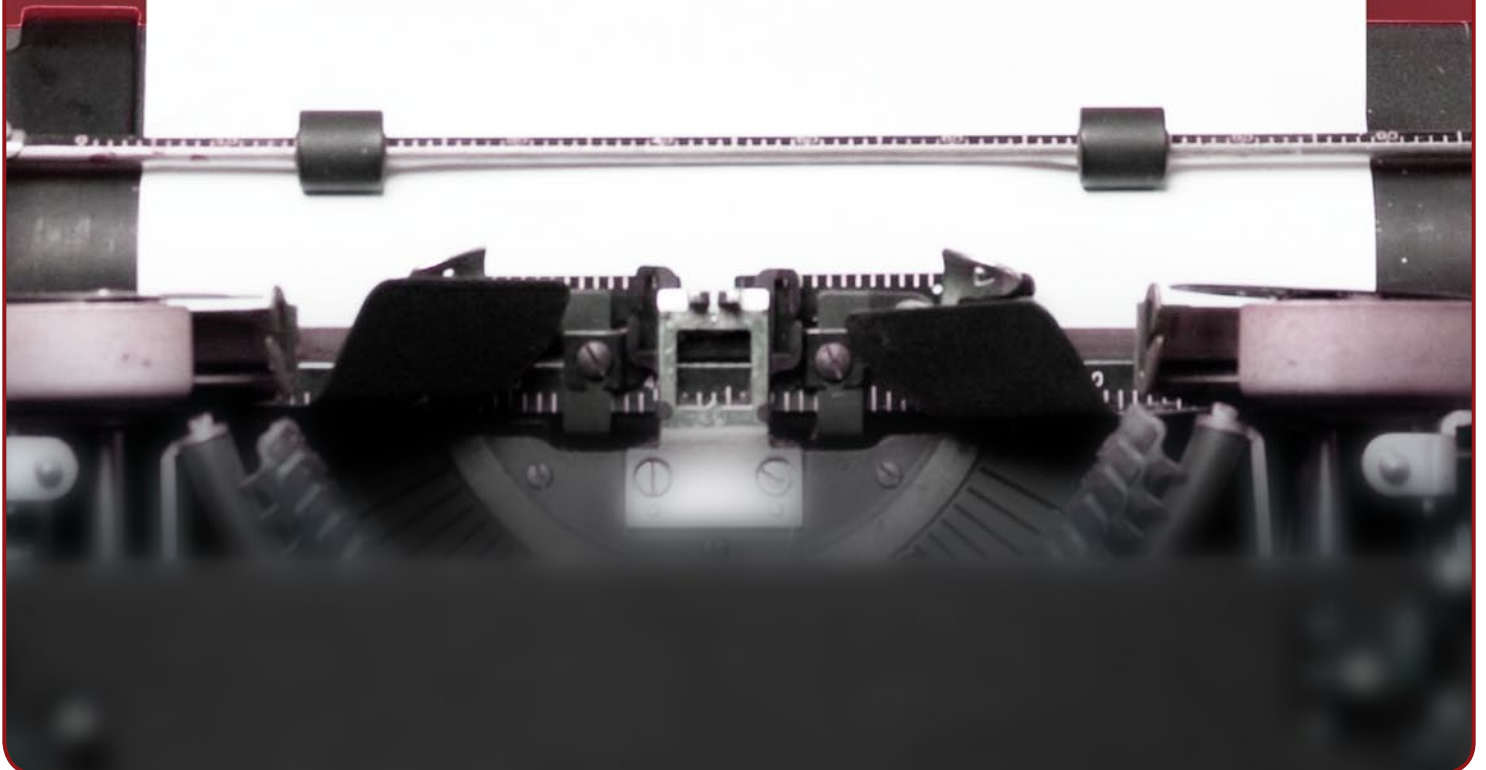
Prepared by: SHaab, NCHHSTP, (404) 639-1234

Spelling verifier used by: LRyan 11/27/11

SECTION III: WRITING MEMOS AND OTHER CORRESPONDENCE

Section III presents writing and formatting guidelines for memos and other types of correspondence sent within CDC or going to HHS. This section will help you with guidelines for submitting the following types of correspondence:

- Memos sent within CDC
- Correspondence sent to HHS
- E-mail



CHAPTER 7: MEMOS SENT WITHIN CDC

In addition to the writing guidelines discussed earlier in this manual, which also apply to memos, consider these tips for writing effective memos.

Tips for Writing Memos Sent Within CDC

- Address only one topic per memo. If you need to convey information about more than one topic, write a different memo for each one.
- Be short but specific in the Subject line (e.g., instead of writing *Restructuring*, write *CDC/ATSDR Senior Management Team Restructuring*).
- Be clear and concise but provide background information in the introductory paragraph, unless the recipients already know the topic of the memo.

- Use the word *Attachment*, not the word *Enclosure*, when attaching additional material to a memo.

Note: Because they disseminate news to keep employees informed about CDC events or policies, certain types of e-mails—such as OD, CDC, or OHS announcements—also function as memos and should follow the same guidelines. For more on e-mail, see **Chapter 9**.

*The great artist
is the simplifier.*

- Henri Amiel



Formatting Memos Sent Within CDC

The following table details the formatting conventions for memos sent within CDC.

TOPIC	FORMAT
Font	Use Times New Roman, point size 12. If size 12 does not fit, adjust margins or use size 11.5.
Justification (Text Alignment)	<ul style="list-style-type: none">• Align text left.• Do not justify (make straight) the right margin.
Letterhead	Print on CDC letterhead (first page only).
Line Spacing	<ul style="list-style-type: none">• Draft: double space the lines.• Final: single space the lines.
Margins	Margins should be 1-inch all around.
Page Numbers and Headers	<ul style="list-style-type: none">• Omit the page number from the first page.• Place the page number and the name of the person to whom the memo is going in a header at the top of subsequent pages. <p>Example: Page 2 – The Director</p> <p>Note: For information on how to create a header, see Appendix E.</p>
Paragraphs	<ul style="list-style-type: none">• Do not indent paragraphs.• Insert a blank line between paragraphs.
Sentences	Insert one space after the period at the end of each sentence. Note: For instructions on setting the spacing, see Appendix E .
Attachments	If appropriate, leave one blank line after the signature block and insert the word <i>Attachment</i> or <i>Attachments</i> . List the attachment(s) on the next line.

Following is a sample memo sent within CDC.

TO: Director, Centers for Disease Control and Prevention

FROM: Director, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

DATE: July 21, 2011

SUBJECT: Invitation for Assistant Secretary for Health Howard Koh to Speak During the Opening Plenary Session at the 2011 National HIV Prevention Conference, August 14, 2011, in Atlanta, Georgia.

Issue

The Centers for Disease Control and Prevention's (CDC) National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention would like to invite Assistant Secretary Koh to provide a welcome address at the 2011 National HIV Prevention Conference on August 14, 2011, from 4:15 p.m. – 4:25 p.m.

Recommendation

We request that you sign the attached decision memo and letter inviting the Assistant Secretary to speak at the 2011 National HIV Prevention Conference.

BACKGROUND

CDC, in cooperation with other federal agencies and numerous private-sector organizations, is co-sponsoring the 2011 National HIV Prevention Conference, August 14-17, 2011, at the Hyatt Regency Atlanta and Marriott Marquis hotels in Atlanta, Georgia. Approximately 3,000 public health professionals, clinicians, community organization representatives, and advocates involved in HIV prevention have been invited to this conference. These groups, convened by CDC, represent public and private organizations whose interaction, cooperation, and coordination are crucial to successful efforts to prevent HIV and AIDS in the United States.

We would like to invite the Assistant Secretary to provide ten minutes of remarks during the opening ceremony of the 2011 National HIV Prevention Conference. We believe that the Assistant Secretary's participation will demonstrate HHS' support of efforts to end the HIV/AIDS epidemic in the United States. In the year since the publication of the National HIV/AIDS Strategy, HHS has shown substantial leadership in its implementation and coordination across departments. Despite challenging economic times, the HHS fiscal year 2011 investments in HIV prevention, treatment, care, and research remain robust, further demonstrating HHS' commitment to making real gains in the fight against HIV at home and abroad. This conference would provide an opportunity for the Assistant Secretary to speak directly to our key constituents about his vision for our national HIV response and HHS' continued commitment to the fight against this disease.

Kevin Fenton, MD, PhD, FFPH

Attachments:

Tab A – Draft Agenda

Tab B – Letter of Invitation

Tab C – Decision Memo to Assistant Secretary Koh

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments:

Thomas R. Frieden, MD, MPH
Director

CHAPTER 8: CORRESPONDENCE SENT TO HHS

From time to time you may have to send specific memos to HHS, such as decision (simple or complex), briefing, or information memos.

Writing Memos Sent to HHS

Following are guidelines for developing these memos. You can find sample memos in **Appendix F**.

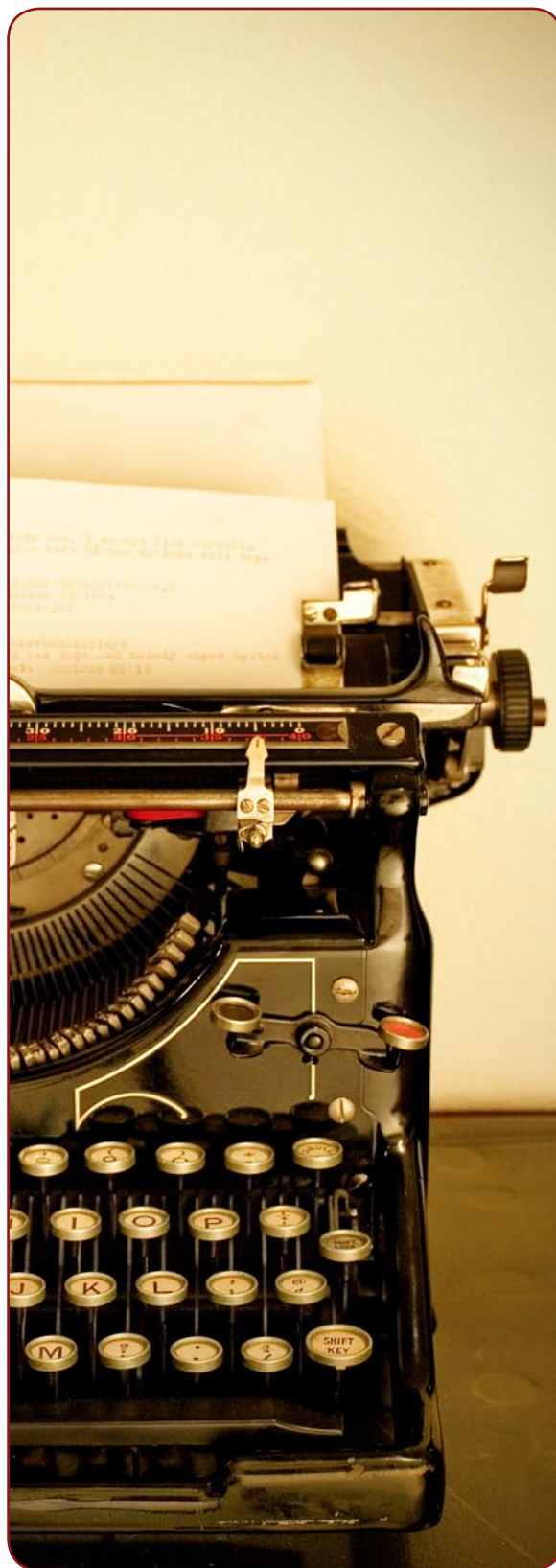
SIMPLE DECISION MEMOS

Simple decision memos address a single, straightforward issue and should not exceed two pages. These memos can be used to seek approval to release a report or issue a non-controversial regulation, to invite a speaker to a conference, or other basic action. They can also be used to request approval to issue a lengthy report, plan, or other document. If doing so, include an abbreviated summary and two copies of the report. Submit lengthy background material, when necessary, as tabbed attachments.

The *Issue* section should contain a concise statement (preferably one sentence or a short paragraph) describing the issue or request. If the memo is an invitation, include the invitation in this section, along with details (e.g., dates, times).

The *Secretarial Action* section should state the action recommended by CDC, as well as the date the action is requested by.

The *Background* section should contain pertinent information regarding the origin, background, and implications of the issue or problem. It should also contain a brief statement explaining why the *Action Requested By* date should be met.



Below is an example of a simple decision memo. All other memos follow the same basic guidelines. You can find more samples in Appendix F.

TO: The Secretary
Through: DS ____
COS ____
ES ____

FROM: Director, Centers for Disease Control and Prevention
Commissioner, Food and Drug Administration
Director, National Institutes of Health

DATE: October 17, 2011

SUBJECT: Presidential Proclamation Recognizing November 14–20, 2011, as Get Smart About Antibiotics Week

Issue

The Centers for Disease Control and Prevention (CDC), the Food and Drug Administration, and the National Institutes of Health request submission to the White House of a presidential proclamation recognizing November 14–20, 2011, as Get Smart About Antibiotics Week.

Secretarial Action

We ask that you sign the attached memorandum and forward the presidential proclamation to the White House for approval.

BACKGROUND

Thousands of Americans will become ill with respiratory infections throughout the year and may unnecessarily use antibiotics. At this time of year, when many Americans are thinking about cold and flu season, it is particularly important to call attention to the appropriate use of antibiotics. The number of bacteria resistant to antibiotics has increased in the last decade and many bacterial infections are becoming resistant to the most commonly prescribed antibiotic treatments. Misuse of antibiotics jeopardizes the usefulness of essential drugs. Decreasing inappropriate antibiotic use is an important strategy in the fight to control antibiotic resistance.

Proclaiming the week of November 14–20, 2011, as Get Smart About Antibiotics Week will raise the profile of the important public health issue of antibiotic resistance—one of the world’s most pressing public health problems—and improve antibiotic use behavior.

Thomas R. Frieden, MD, MPH Margaret A. Hamburg, MD Francis S. Collins, MD, PhD

Attachments:

Tab A – Transmittal Memorandum to the White House

Tab B – Presidential Proclamation: Get Smart About Antibiotics Week

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments:

Kathleen Sebelius
Secretary

COMPLEX DECISION MEMOS

Complex decision memos present an issue that is not straightforward and for which a variety of alternatives or options need to be presented. You should clearly present the issue(s) and relevant background information, with pros and cons for each option presented in bulleted form.

Present options in a neutral fashion so as not to favor any one side.

The *Issue* section should contain a concise statement (preferably one sentence or a short paragraph) describing the issue(s) or request(s).

The *Secretarial Action* section provides a recommendation regarding the suggested course of action, as well as the date the action is requested by.

The *Background* section should contain pertinent information regarding the origin, background, and implications of the issue(s) or request(s). It should also contain a brief statement explaining why the *Action Requested By* date should be met.

Each option should be listed clearly and concisely in its own numbered *Recommendation* section (i.e., *Recommendation 1*, *Recommendation 2*). Each option should be followed by a discussion that includes information about who would benefit if the option were chosen; who would be adversely affected; how those affected are anticipated to react; and how much the option will cost in terms of dollars, staff, and administrative responsibilities. The pros and cons of each option should follow, in bulleted form.

Following each *Recommendation* section, a *Decision* section should provide approval/disapproval lines for the addressee's use.

Following are items to include when drafting complex decision memos:

- A clear and concise explanation of the issue requiring a decision (preferably a short paragraph about the issue/request).
- A framework for the decision to be made in the form of chronological background information. Do not overwhelm the presentation with details.
- A minimum of two options.
- Anticipated reactions from external groups (e.g., Congress, industry, states) in the *Recommendation* section.
- A minimum of two pros and two cons for each option. Present them in a balanced fashion.
- Costs of options, if available/applicable.
- Date/time frame in which a decision is required only if a true time constraint exists (explain in the *Background* section).

BRIEFING MEMOS

Use briefing memos to brief HHS officials on a public health issue or to provide information for an upcoming event (e.g., meeting, speech, hearing). These memos should contain clear and concise information to familiarize HHS officials with the purpose of the briefing.

The *Background* section should contain information about the issue at hand. When appropriate, include questions that may be raised in the *Issues of Concern* section. The *Discussion* section should summarize HHS' current or previous responses to each of the issues addressed in the *Background* section. When appropriate, provide talking points.

Formatting Memos Sent to HHS

The following table details the formatting conventions for memos sent to HHS.

TOPIC	FORMAT
Font	Use Times New Roman, point size 12. If size 12 does not fit, adjust margins or use size 11.5.
Justification (Text Alignment)	<ul style="list-style-type: none">• Align text left.• Do not justify (make straight) the right margin.
Letterhead	Print on CDC letterhead (first page only).
Line Spacing	<ul style="list-style-type: none">• Draft: double space the lines.• Final: single space the lines.
Margins	Use 1" margins all around, with the first line of text starting on line 9 (at 2.5" from the top of the page).
Page Numbers and Headers	<ul style="list-style-type: none">• Omit the page number from the first page.• Center the page number at the bottom of subsequent pages. <p>Example: - 2 -</p> <p>Note: For information on how to create a header, see Appendix E.</p>
Paragraphs	<ul style="list-style-type: none">• Do not indent paragraphs.• Insert a blank line between paragraphs.
Sentences	Insert one space after the period at the end of each sentence. Note: For instructions on setting the spacing, see Appendix E .
Attachments	If appropriate, leave one blank line after the signature block and insert the word <i>Attachment</i> or <i>Attachments</i> . List the attachment(s) on the next line.

Writing Other Correspondence Sent to HHS

Following are guidelines for summary statements (in-house and secretarial correspondence).

RESPONSIVE SUMMARY STATEMENTS—SECRETARIAL CORRESPONDENCE

When HHS assigns a CIO a letter that requires the Secretary's signature, a responsive summary statement written by the CIO must accompany the draft response submitted to the Division of Executive Secretariat. The responsive summary statement serves as a cover page summarizing the response, and should serve as a stand-alone document that does not exceed one page. Responsive summary statements should include the following information:

- Name(s) of correspondent.
- Subject/issues raised by the correspondent.
- Major points in the response.
- Other pertinent information.
- Contact person(s).

TRANSMITTAL SUMMARY STATEMENTS—SECRETARIAL CORRESPONDENCE

When the CIO initiates communication with the Secretary, a transmittal summary statement written by the CIO accompanies the correspondence. Like a responsive summary statement, the transmittal summary statement serves as a cover page summarizing the draft memo the CIO submits to the Division of Executive Secretariat. It serves as a stand-alone document and does not exceed one page. Transmittal summary statements include the following information:

- Subject/issues/OPDIV
- Summary
- Recommendation
- Contact person(s)

IN-HOUSE SUMMARY STATEMENTS—CIO-ORIGINATED CORRESPONDENCE

An In-House Summary Statement is included with CIO-originated correspondence going to CDC's Division of Executive Secretariat for the signature of the CDC Director or the CDC executive leadership team. The in-house summary statement must include a one-paragraph justification explaining why the CIO is requesting the specific action or signature of the above-mentioned persons. The paragraph should include the following information:

- Subject
- Purpose
- Summary and concerns (if any)
- Recommended action(s)
- Contact person(s)
- Telephone number

HHS/IOS/ES TRANSMITTAL MEMOS

HHS/IOS/ES Transmittal Memos accompany all proposed regulations sent to HHS for review/clear. The transmittal memo, signed by the CDC Director, provides the issue, background or discussion, and a recommendation that the Secretary approve the *Federal Register* notice announcing the rule. In addition to the information typically included in a simple decision memo, an HHS/IOS/ES transmittal memo outlines the audience, purpose, distribution, and release date of the proposed rule. A summary statement accompanies the transmittal memo.

For more information about the Executive Secretariat clearance process, see [Appendix G](#).

APPENDIX F has examples of each type of correspondence discussed in this chapter.

CHAPTER 9: GUIDELINES FOR E-MAIL

E-mail is one of the most widely used means of communication at CDC. You should use the same care and caution drafting e-mails as you would writing letters or memos. Following are a few rules of “netiquette” to ensure that your e-mail is effective and professional.

Writing E-mails

Grammar. Use correct grammar, punctuation, and spelling. Be sure the **Always check spelling** option is checked and activated (see box for instructions).

Style. Compose brief single-topic messages.

Tone. Be courteous and respectful. Because e-mails cannot convey tone very well, it is easy to unintentionally offend your reader. Never be rude, sarcastic, or caustic.

Content. An e-mail is a public document. Only write messages that you would not be embarrassed to see disseminated in public. Even though you may think your message is private, *it is not*.

Topic. Do not send chain letters, doubtful humor, or anything else that is unprofessional.

ACTIVATING THE SPELL CHECKER IN OUTLOOK

1. On your *Outlook* toolbar, select **Tools, Options**.
2. Select the **Spelling** tab.
3. Check the first two options.
4. Click **OK**.

Formatting E-mails

Subject Line. Use a short, descriptive subject line. Never leave the subject line blank; your message may get deleted without being read.

Signature. Use a signature block. Include all pertinent information, such as your title, the name of your office, and your phone and fax numbers. You may also consider including your CIO’s web address.

All Caps and Lowercase. Do not write in all caps or all lowercase letters. Both make your message hard to read, and writing in all caps is the equivalent of shouting.

Sending E-mails

Hostile Mail. Think twice before sending that scathing message. Before venting your anger, ask yourself:

- Would I say this to the person face-to-face?
- Will this put the reader in an awkward position?
- How would I feel if I received this message?

Forwarding. Do not forward messages indiscriminately. When forwarding someone else's e-mail, ask the original writer's permission if the message contains personal information.

Reply to all. When replying to a message that was sent to multiple readers, decide if you need to reply just to the sender or to everyone on the list.

Using cc:. Send copies (cc:) only to those who really need a copy.

Using bcc:. This feature allows you to copy a third party without the original correspondent knowing about it. Use it with care: if the original correspondent discovers you copied someone without their knowledge, it may put you in an unflattering light.

Attachments. Do not send attachments if the text is sufficient. Attachments take up space and increase downloading time.



Delaying, Recalling, or Replacing a Message

DELAYING DELIVERY OF A MESSAGE

You can compose a message that will be sent at a later time and date of your choice.

1. Compose your e-mail.
2. On your *Outlook* toolbar, click **Options**.
3. Under **More options**, select **Delay delivery**.
4. Check the **Do not deliver before** box.
5. Select the date and time you want the e-mail to be sent.
6. Click **Close**.
7. Click **Send**, just as you would any other message.

RECALLING OR REPLACING A MESSAGE

You can only use these features if the recipient is using Microsoft Outlook and has not yet read the message. When you send a recall notice, it will show up in the recipient's inbox. If the recipient does not open either the original message or the recall notice, both messages will disappear from the inbox within one minute of the recall notice.

1. Open the **Sent Items** folder.
2. Open the message you wish to recall.
3. Select the **Message** tab.
4. Under **Move**, click **Actions**, **Recall This Message**.
5. Select the appropriate option (you can either delete unread copies of the message or replace it with another message) and click **OK**.

SECTION IV: APPENDICES AND REFERENCES

Section IV contains a variety of useful resources that give specific technical and clearance guidance related to official correspondence, including:

Appendix A. One Word or Two? List

Appendix B. Jargon

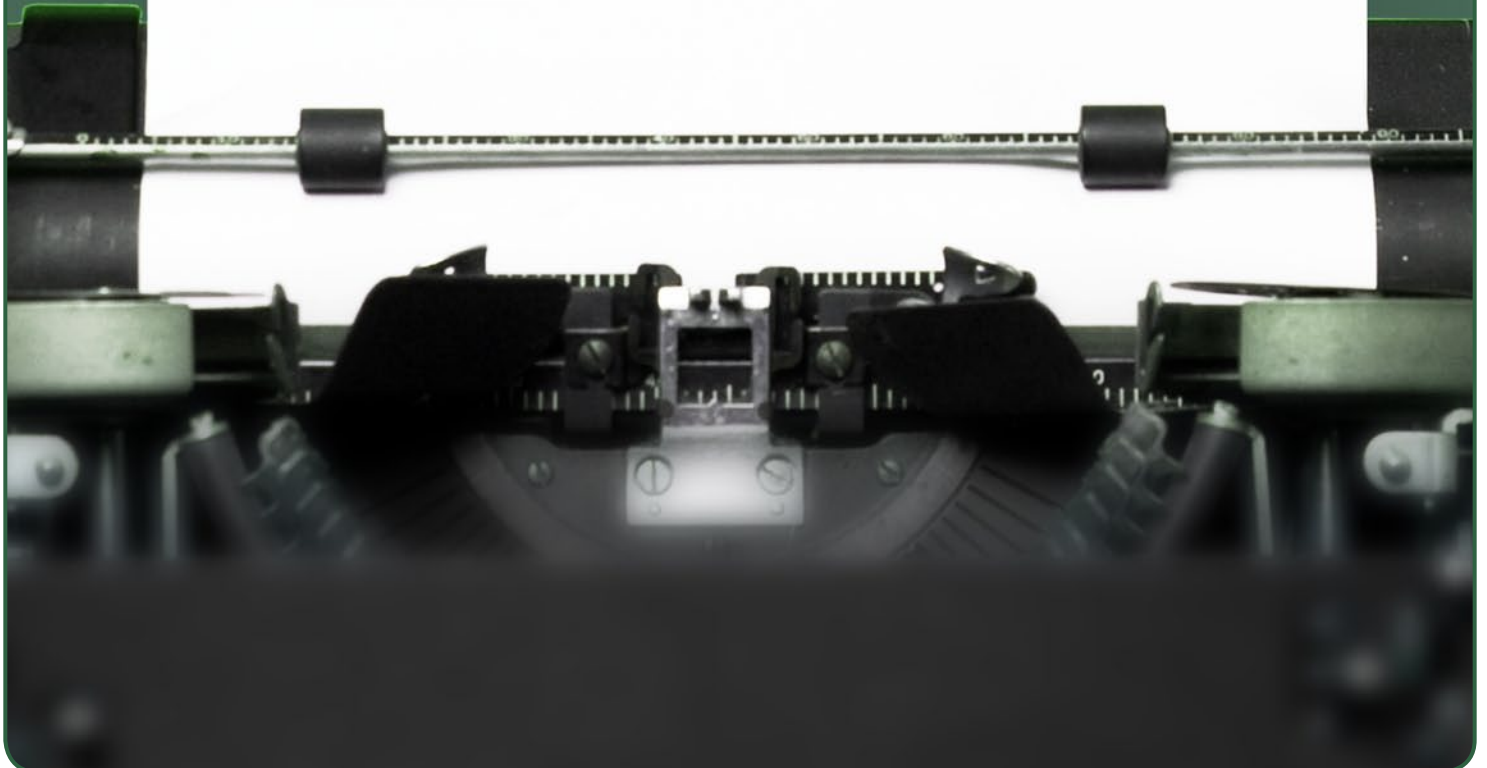
Appendix C. Tautologies and Redundancies

Appendix D. Checklist for Writing and Formatting

Appendix E. *Word 2010* Help

Appendix F. Sample Correspondence

Appendix G. The Executive Secretariat Clearance Process



APPENDIX A: ONE WORD OR TWO?

after-school program	decision making (v), decision-making (adj)
allover	dropout (n), drop out (v), drop-out (adj)
anti-inflammatory	e-mail
antitobacco	end user
back-order (v)	everyday (adj)
backup (n), back up (v), back-up (adj)	fact sheet
bedbug	fade-out
bed net (n), bed-net (adj)	fast-food (adj)
birth weight*	fieldwork
bloodborne	field-worker
breast-feed*	fingerstick
breakup (n), break up (v)	flier (person)
built-in (adj)	flyer (fact sheet)
buy in	flip chart
by-product	follow-up (n), follow up (v)
caregiver	foodborne
case-patient	food service
CD-ROM	fresh water (n), freshwater (adj)
checklist	frontline (adj), front line (noun)
checkup	fund-raiser
chickenpox	groundwater
childbearing	hand-carry
child care	hands-on (adj)
cleanup (n)	handwashing
clean-up (adj)	health care
clear-cut	HIV-positive
clockwise	hotspot
coinfection	in-depth
comorbid	in-house
counter marketing	in-kind
coworker	inpatient
crosscutting	in-store
cross section	in utero
cut off (v), cutoff (n, adj)	kickoff (n), kick off (v), kick-off (adj)
data set	kindergarten
database	kindergartner
day care (n), day-care (adj)	life cycle
decision maker	lifelong

lifetime
Listserv
live-born
lockup
longstanding
long-term
lunchtime
man-made
mosquito-borne
multiphase
nationwide
needlestick
non-English-speaking
occasional
off-line
onetime (adj)
ongoing
online
on-site/off-site
open-source (adj)
overall
outpatient
over-the-counter
pilot test
policyholder
policy maker
postcard
postmortem
postpartum
preexisting
preschool
preteen
preteen-ager
real-time
scale-up
secondhand
school-aged
schoolchildren
schoolwork
school yard
soundproof

standby (adj)
T cell (n), T-cell (adj)
tabletop
task force
tenfold (& two through ninefold)
tickborne
time line
time frame
tool box
tool kit*
top-down
troubleshoot
under way (adv), underway (adj)
up-front (adj), up front (adv)
vectorborne
walkathon
waterborne
webmaster
website
webzine
weekday
weekend
well-being
workbook
workday
work flow
workforce
work group
workload
workout (n), work out (v)
work-up (n), work up (v)
workplace
work plan
work sheet
workshop
work site*
worldwide

*Notes

Birth weight: This is the CDC preferred spelling, but **birthweight** is also acceptable.

Breast-feed: This is the CDC preferred spelling, but **breastfeed** is also acceptable.

Tool kit: This is the CDC preferred spelling, but **toolkit** is also acceptable.

Work site: This is the CDC preferred spelling, but **worksite** is also acceptable.

Below is a list of common prefixes. Hyphenation is not necessary, except as noted.

ante	inter	over	sub
anti	intra	post	super
co	macro	pre	supra
counter	micro	pro	trans
de	mid	pseudo	ultra
extra	multi	re	un
infra	non	semi	

Exceptions are

- Before a capital letter (un-American, sub-Saharan).
- Before an abbreviation or acronym (non-mRNA).
- Before a numeral (pre-1970).
- To avoid confusion with a similar unhyphenated word (re-cover, re-creation).
- To avoid a confusing meaning, as in immunologic terms such as anti-rabbit, anti-goat, anti-mouse, anti-human. “Goat anti-rabbit IgG” means goat antiserum against rabbit IgG, not goat IgG that is anti-rabbit.
- Even if letters are doubled, common prefixes are usually not joined by hyphens.
 - antiinflammatory
 - intraabdominal
 - nonnegotiable
 - posttraumatic
- Always hyphenate after the prefixes “self-” and “cross-”. self-aware, self-sticking, cross-react
- Most common suffixes are joined without a hyphen: -fold, -hood, -less, -like, -wide, and -wise, unless doing so creates an unclear or excessively long word, triples a consonant (bell-like), follows a proper noun (Whitman-like), or follows a number (10-fold, 2.5-fold).
- Do not hyphenate after an adverb ending in -ly, even when used in a compound modifier preceding the word modified.
 - The rapidly rising temperature caused...
- Do not hyphenate foreign phrases that are printed open in other circumstances (e.g., in vitro translation, in situ protein synthesis, in vitro–stimulated growth, in situ–synthesized proteins).

APPENDIX B: JARGON

AVOID	PREFER
A	
a considerable amount	much
a considerable number	many
accomplish	do, achieve
accordingly	so
accumulate	gather
acquire	get
activate	begin, start
adequate number of	enough
adjacent to	next to, near
advantageous	useful, helpful
afford the opportunity	allow
allocate	give
along the lines of	like, as in
ameliorate	improve
an estimated	about
as consequence of	because
as a result of the fact that	because
as long as	if, since
as regards	about
as well as	and, also
at all times	always
at an early date	soon (or say when)
at the moment	now

AVOID	PREFER
at the present time	now
at the time that	when
attain	reach
augment	increase
B	
by means of	by
C	
close proximity	near
commence	begin, start
completion	end
comply with	follow, obey
components	parts
conceal	hide
concerning	about
construct	build
contrary to	against
cumulative	added
currently	now
customary	usual
D	
depict	show
demonstrate	show, prove
desist	stop
despite the fact that	although, though
detrimental	harmful
disconnect	cut off, unplug

AVOID	PREFER
disseminate	send, distribute, spread
due to the fact that	because
duplicate	copy
during the course of	during
during the time that	while
during which time	while
E	
effect (v)	make
effectuate	bring about, carry out
elucidate	explain
employ	use
endeavor to	try
enquire	ask
ensuing	following
equivalent	equal
evaluate	test
except when	unless
F	
facilitate	make easier, ease, help
facilities	building, laboratory, office
feasible	possible
feedback	comments, response
finalize	complete, conclude, finish
following	after
for the duration of	during, while
for the purpose of	for

AVOID	PREFER
for the reason that	because
formulate	work out, devise
frequently	often
functionality	function
fundamental	basic
G	
give rise to	cause
I	
illustrate	show
impact (v)	affect, influence
implement	carry out, do
in almost all instances	nearly always
in a number of cases	in some cases (or say how many)
in a timely manner	promptly, soon
in addition to	and , also
in advance	before
in case of	if
in conjunction with	and, with
in most cases	often, mostly
in order to	to
in reference to	about
in spite of the fact that	despite
in terms of	about
in the absence of	without
in the amount of	for
in the context of	in
in the course of	during, while
in the event of	if

AVOID	PREFER
in the near future	soon
in the neighborhood	about, around
in the vicinity of	near
is in position to	can
it is clear that	clearly
it is incumbent upon us	we must
in view of the fact	as, because
it would appear that	apparently
it is probable that	probably
inception	start
initial	first
input	comment
inquire	ask
institute (v)	begin set up, start
L	
large number of	many (or say how many)
linkage	link
listing	list
location, locality	place
M	
magnitude	size
manner	way
manufacturer	make
materialize	occur, happen, appear
methodology	methods, procedure
mitigate	moderate, ease, soften, relieve, reduce
moreover	besides, also, and

AVOID	PREFER
N	
necessitate	require, need
nevertheless	but, however
not in a position to	unable
O	
objective	aim, goal
observe	see
obtain	get
on a regular basis	regularly
on behalf of	for
on numerous occasions	often
on the condition that	if
on the grounds that	because
on the occasion that	when, if
on the part of	by
operate	use
operational	working, active, running
otherwise	or
output	product
P	
paradigm	pattern, example
parameter	boundary, limit, extent
partially	partly
permit	let
pertaining to	about
place (v)	put
portion	part

AVOID	PREFER
predominant	main
preparatory to	before
presently	soon, shortly
previous to	before
prioritize	rank
procure	get, obtain
prolonged	long
provided that	if
purchase	buy
R	
about, on	regarding
rule	regulation
rest	remainder
is	represents
ask	request (v)
need	require
live, stay	reside
home, house	residence
keep	retain
S	
solely	only
state (v)	say
statutory	legal, by law
strategize	plan
subsequently	later
subsequent	next
subsequent to	other
substantial	big
substantiate	prove

AVOID	PREFER
sufficient	enough
T	
take into consideration	consider
terminate	end, finish, stop
the majority of	most
thereafter	then
through the use of	by, with
transmit	send
transpire	happen, occur, take place
U	
ultimate	last, final
uniform	same, similar
unoccupied	empty
until such time	until
upon	on
utilization	use
utilize	use
V	
viable	possible
virtually	almost
visualize	see
W	
with regards to	about

APPENDIX C: TAUTOLOGIES AND REDUNDANCIES

SUPERFLUOUS	CORRECT
A	
absolutely complete	complete
absolutely essential	essential
actual, past/present experience	experience
added bonus	bonus
advance planning	planning, notice
already exist	exist
and also	and, also (but not both)
ask the question	ask
assembled together	assembled
at about	at, about (but not both)
B	
basic fundamental	basic, fundamental (but not both)
C	
cancel out	cancel
cd-rom disk	cd-rom
center around	center
clearly evident	evident
blue/red/yellow in color	blue/red/yellow
completely destroyed	destroyed
complete monopoly	monopoly
consensus of opinion	consensus
contributing factor	factor

SUPERFLUOUS	CORRECT
controversial issue	issue
cooperate together	cooperate
costs a total of	costs
current status	status
D	
doctorate degree	doctorate
E	
each and every	each, every (but not both)
exactly identical	identical
extremely minimal	minimal
F	
few in number	few
filled to capacity	filled
final outcome	outcome
first and foremost	first
foreign imports	imports
future plans	plans
G–H	
general public	public
hiv virus	hiv
I	
if and when	if, when (but not both)
it is clear	(omit)
it is obvious	(omit)

SUPERFLUOUS	CORRECT
J-L	
join together	join
large in size	together
M	
mixed together	mixed
month of January	January
more and more often	often
N	
new breakthrough	breakthrough
none at all	none
O	
over and over again	repeatedly
overexaggerate	exaggerate
P	
past history/ experience	history, experience
period of time	period, time (but not both)
point in time	now, today
postpone until later	postpone
R	
repeat again	repeat
S	
small in size	small
square in shape	square
still remains	remains
sum total	total

SUPERFLUOUS	CORRECT
T	
temporary loan	loan
time period	time, period, (but not both)
total number	total
true fact	fact
12 noon/ 12 midnight	noon, midnight
U	
unite together	unite
usual habit	habit
V	
visible to the eye	visible

APPENDIX D: CHECKLIST

Use this checklist to ensure that your letter is written and formatted correctly.

FORMATTING

- ✓ Are the margins correct (1" for letters)?
- ✓ Is the line spacing correct (single-spaced finals, double-spaced drafts)?
- ✓ Is there only one space after each sentence?
- ✓ Is the text justified on the left side only?
- ✓ Is there a blank line between paragraphs?
- ✓ Are the paragraphs flush left (not indented)?
- ✓ Are the pages numbered (no number for page 1, header for other pages)?
- ✓ Does the header have the correct information?

ADDRESS AND SALUTATION

- ✓ Does the address start on line 9 (at 2.5" from the top of the page)?
- ✓ Is the salutation correct?
- ✓ Are the necessary words spelled out (Street, not St.; Georgia, not GA)?
- ✓ Are there two spaces between the state and the Zip code?

SPELLING

- ✓ Did you use the spell checker (F7 key)?
- ✓ Did you avoid symbols (percent, not %)?

MECHANICS (CAPITALIZATION, ABBREVIATIONS, ACRONYMS)

- ✓ Did you avoid unnecessary capitalization of words?
- ✓ Are acronyms spelled out the first time they appear in the text, followed by the acronym in parentheses?

APPENDIX E: WORD 2010 HELP

Following are instructions and tips to help you use *Word 2010* more efficiently. You must be in *Word 2010* to perform the instructions below.

Setting Margins

The standard margin size for CDC correspondence is 1" on all sides. However, the default margin settings in *Word 2010* are as follows: 1" margins at the top and bottom of the page, and 1.25" margins at the left and right of the page. To change the default settings to 1" margins all around, follow the directions below.

1. On your toolbar, click **Page Layout**, **Page Setup**.
2. Select the **Margins** tab.
3. In the **Margins** section, select 1" in the **Top**, **Bottom**, **Left**, and **Right** boxes.
4. Click **Set as Default** (bottom left of the window) and **Yes**.

Every document you open will now have 1" margins all around.

Inserting a Header into a Document

Letters that have two or more pages need to have a header at the top of every page, except the first page, which should be CDC letterhead. The header contains information such as page number and title of document.

INSERTING THE HEADER

1. Place your cursor on the second page of your document.
2. On your toolbar, select the **Insert** tab.
3. Select **Header** and click **Edit header**.
4. A **Design** tab will appear.
5. Check the **Different first page** box.
6. Type the word **Page** in the Header box and insert a space.
7. Go to the **Header and Footer** tab and click the **Page Number** button.
8. Select **Current position** to automatically insert the page number in the header.
9. Insert another space, an *en* dash, another space, and then the title of your document.
(*Note:* For more on inserting *en* dashes, see inset box and the section below.)
10. Click **Close Header and Footer** to go back to your document.

ELIMINATING THE HEADER

1. Double-click the header.
2. Highlight the text in the header and delete it.
3. Click **Close**.

Inserting the en or em Dash

1. Place the cursor where you want to insert the en or em dash in the text.
2. On the toolbar, click **Insert**.
3. Click **Symbol**, **More Symbols**.
4. Under **Font**, select (**normal text**).
5. Under **Subset**, select **General Punctuation**.
6. Double-click the – or — symbol.
7. Click **Close**.

THE DIFFERENCE BETWEEN HYPHENS AND DASHES

Hyphens and dashes are not interchangeable.

- A hyphen (-) separates compound words (e.g., double-click).
- An en dash (–) indicates ranges (e.g., 1990–1995).
- An em dash (—) indicates a break in thought or sentence structure (e.g., He came to the meeting—for the first time ever—and spoke up).

Spacing between Sentences

The standard used for most documents (e.g., books, reports, newspapers) requires only one space between sentences. This creates a tighter text effect and makes words easier to read. You can set the spell checker to check that you have the desired spacing between sentences in your document.

SETTING THE SPELL CHECKER TO CHECK CORRECT SENTENCE SPACING

1. On your toolbar, click **Review, Spelling & Grammar**.
2. Click **Options**.
3. Select the **Proofing** tab.
4. Under the **When correcting spelling and grammar in Word** heading, click **Settings**.
5. Under **Require**, find the **Spaces required between sentences** line (third line) and select the number of spaces you want from the drop-down list.
6. Click **OK** and click **OK**.

Drafts and Watermarks

A draft is a work in progress that only reviewers should see at this stage. You can identify the document as a draft by inserting a watermark on each page. A watermark can be a graphic or a word that appears in grey behind the text.

INSERTING THE DRAFT WATERMARK

1. On your toolbar, go to **Page Layout** and click the **Watermark** drop-down tab.
2. Select **DRAFT** (or another text).

Note: To eliminate the watermark, repeat Step 1, then click **Remove watermark**.

Converting a Word 2010 File into a PDF File

The Adobe Portable Document Format (PDF) converts documents into a reliable format that can be viewed and printed on various platforms while preserving the look of the original document. For example, if you want to share a document that was created in *Word 2010* with someone who does not have *Word 2010*, you can convert the document into a PDF file, which your correspondent will be able to read and print (but not alter electronically).

1. Open the *Word 2010* document you want to convert.
2. From the **File** tab, select **Print**.
3. In the **Printer** drop-down box, select **CDC PDFWriter**.
4. Click **Print** to open the **Save PDF File As** window.
5. Choose a file name and location and click **Save**.
6. Exit *Word 2010* and open the PDF file from its current location.

Note: Do not try to open the PDF file in *Word 2010*; you will be unable to view it.

Shortcut Keys

Using the keyboard shortcut keys instead of the mouse to execute commands will save you time, once you memorize the commands.

GENERAL

KEY	RESULT
F1	Open <i>Microsoft Help</i>
F4	Repeat the last action performed
F5	Open the Find, Replace, and Go To tabs
F7	Open the Spelling and Grammar window
F12	Open the Save As window

EDITING

KEY	RESULT
CTRL + A	Select (highlight) the entire document
CTRL + X	Cut the selected text
CTRL + C	Copy the selected text
CTRL + V	Paste the selected text
CTRL + Z	Undo the last action
CTRL + Y	Redo the last action

FORMATTING

KEY	RESULT
CTRL + B	Boldface the selected text
CTRL + I	Italicize the selected text
CTRL + U	Underline the selected text

OTHER

KEY	RESULT
CTRL + F	Open the Find and Replace window
CTRL + N	Open a new document
CTRL + O	Open an existing document
CTRL + S	Save
CTRL + P	Print

In addition to the list provided, you may visit www.keyxl.com/aaa2cd7/445/Microsoft-Word-2010-keyboard-shortcuts.htm for a comprehensive list of shortcut keys available in *Word 2010*.

APPENDIX F: SAMPLE CORRESPONDENCE

- Basic Letter
- Responsive Summary Statement
- Transmittal Summary Statement
- In-house Summary Statement
- Simple Decision Memo
- Complex Decision Memo
- HHS/IOS/ES Transmittal Memo

Sample Letter

March 21, 2011

Ms. Dorothy Gale
1193 Yellow Brick Road
Middleof, Kansas 67123

Dear Ms. Gale:

Thank you for your letter regarding traffic emissions-related deaths in Farm County, Georgia. Although there are academic studies available describing our understanding of the health effects of traffic emissions, CDC does not collect the information you have requested.

In any urban area, the air we breathe is made up of a complex mix of pollutants—both natural and man-made. Traffic emissions; industrial emissions; cigarette smoke; and natural sources including pollen, dust, and emissions from wildfires or volcanoes are only part of what mixes into our air, affecting our air quality. Traffic emissions represent a mixture of pollutants including carbon dioxide, carbon monoxide, benzene, and many others. The pollutants from vehicle emissions can also differ depending on the type of vehicle. These complex mixtures make it very difficult to accurately measure a person's exposure to one specific source such as traffic emissions. As a result, estimating adverse health effects or potential deaths from specific air pollution sources can be very challenging.

Many studies have shown links between specific air pollutants—such as ozone—and various health effects, but the direct links between traffic pollution and health are still unclear. The level of risk can depend on factors including the amount of pollution in the air, the amount of air that we breathe at a given time, and our overall health status. One helpful resource is the Executive Summary from the recent state-of-the-science report by the Health Effects Institute, *Traffic-related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects*, which provides a current review of what is known about traffic emissions and health. You can find this document at: <http://pubs.healtheffects.org/getfile.php?u=552>.

Thank you for your interest in this important public health issue. We hope this information will be helpful to you.

Sincerely,

Thomas R. Frieden, MD, MPH
Director, CDC, and
Administrator, Agency for Toxic
Substances and Disease Registry

Sample Transmittal Summary Statement

TRANSMITTAL SUMMARY STATEMENT SECRETARIAL CORRESPONDENCE

SUBJECT/ISSUE/OPDIV:

The Centers for Disease Control and Prevention's (CDC) National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention would like to invite White House Advisor Jeffrey Crowley to provide a 15–20 minute inspirational address and remarks at the 2011 National HIV Prevention Conference on August 14, 2011, from 5:00 p.m. to 5:15 p.m.

SUMMARY:

CDC is co-sponsoring the 2011 National HIV Prevention Conference. Approximately 3,000 public health professionals, clinicians, community organization representatives, and advocates involved in HIV prevention have been invited to this conference. These groups represent public and private organizations whose interaction, cooperation, and coordination are crucial to successful efforts to prevent HIV and AIDS in the United States.

As the President's lead advisor on HIV/AIDS policy, Mr. Crowley's participation will provide valuable insight into the White House perspective on the HIV National Strategy Plan.

RECOMMENDATION:

We ask that the Secretary agree to invite Mr. Crowley to speak at the 2011 National HIV Conference.

CONTACT PERSON: J. Ronald Campbell, CDC/OD/DES, (404) 639-7120

Sample Responsive Summary Statement

RESPONSIVE SUMMARY STATEMENT SECRETARIAL CORRESPONDENCE

NAMES OF CORRESPONDENTS:

Raymond Gist, DDS, President, American Dental Association, and Kathleen T. O'Loughlin, DMD, MPH, Executive Director, American Dental Association

SUBJECT/ISSUES RAISED BY CORRESPONDENTS:

Drs. Gist and O'Loughlin write to Secretary Sebelius expressing their concerns about the oral health organizational structure at the Department of Health and Human Services' (HHS) Centers for Disease Control and Prevention (CDC).

MAJOR POINTS IN THE RESPONSE:

- CDC's National Center for Chronic Disease Prevention and Health Promotion's (NCCDPHP) is fully committed to its Division of Oral Health's mission to prevent and control oral diseases and conditions and reduce disparities.
- CDC serves as the lead agency for the *Healthy People 2020* objective for oral health, is a full and active participant in HHS' 2010 Oral Health Initiative, and has publicly committed to developing a National Surveillance Plan in collaboration with the National Institute of Dental and Craniofacial Research.
- HHS is committed to ensuring that oral health activities provide the maximum possible public health impact.
- NCCDPHP has successfully nurtured programs of similar size within a larger division for many years.
- CDC believes that the ability to focus limited staff and resources on programmatic efforts, rather than division infrastructure, enhances their public health impact.

OTHER PERTINENT INFORMATION: None.

CONTACT PERSON: J. Ronald Campbell, CDC/ES, (404) 639-7120

Sample In-House Summary Statement

In-House Summary Statement

Invitation from Dr. Frieden to Ms. Danielle Gilbert, Office of Representative Debbie Wasserman Schultz (FL), to attend the upcoming meeting of the Advisory Committee on Breast Cancer in Young Women from September 21–23, 2011 at CDC headquarters in Atlanta, Georgia. We recommend that Dr. Frieden sign the memo. Contact J. Ronald Campbell, (404) 639-7120.

Sample Decision Memo to the Secretary, HHS

TO: The Secretary for Health and Human Services
Through: DS _____
COS _____
ES _____

FROM: Director, Centers for Disease Control and Prevention
Administrator, Agency for Toxic Substances and Disease Registry

DATE: February 22, 2011

SUBJECT: Invitation to Speak at the 45th National Immunization Conference on Monday, March 28, 2011, in Washington, D.C.
Action Requested By: March 4, 2011

Issue

The Centers for Disease Control and Prevention (CDC) would like to invite you to introduce the Surgeon General, Dr. Regina M. Benjamin, who is being invited to be the keynote speaker during the opening plenary session of the conference that will be held from 9:00 a.m. until 10:30 a.m., Monday, March 28, 2011. Your participation in the opening ceremony will demonstrate your support of the important role that CDC's National Center for Immunization and Respiratory Diseases (NCIRD) and its immunization partners play in providing comprehensive immunization coverage for all groups. This forum will provide an opportunity for you to personally address a group of health care workers and professionals who are on the front lines in this battle.

Secretarial Action

I recommend you join CDC and our global immunization partners on March 28, 2011, to celebrate our public health successes and re-invigorate our immunization efforts for the future.

BACKGROUND

Each year, local, state, federal, and private-sector immunization partners gather to share the latest scientific and programmatic information, with the ultimate goal of working collaboratively to achieve and maintain high immunization coverage levels among our nation's citizens. Approximately 1,600 participants—physicians, nurses, scientists, program managers, and other public health professionals representing all 50 states and territories—are expected to attend the conference.

In addition, we are issuing an invitation to the Surgeon General Regina M. Benjamin to give the keynote address during the opening plenary.

This year's 45th National Immunization Conference will be convened March 28–31, 2011, at the Washington Hilton, 1919 Connecticut Avenue, NW, Washington, DC 20009. This conference is one of the largest public health events sponsored by CDC. The theme for this year's conference is "Immunization: Achieving Monumental Vaccine Coverage." Draft agendas are attached for your information (Tabs A and B).

CDC staff will be pleased to assist in the preparation of your remarks. Ms. Suzanne Johnson-DeLeon, Conference Manager, NCIRD, CDC, will be happy to answer any questions and provide additional information regarding the conference; your staff may contact her directly at (404) 639-8817 or (404) 639-8225.

Thomas R. Frieden, MD, MPH

Attachments:

Tab A - Summarized Draft Agenda

Tab B - Full Draft Agenda of All Conference Events

Tab C - Formal Invitation Letter

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments:

Kathleen Sebelius
Secretary

Sample Complex Decision Memo to the Secretary, HHS

TO: The Secretary for Health and Human Services
Through: DS _____
COS _____
ES _____

FROM: Director, Centers for Disease Control and Prevention
Administrator, Agency for Toxic Substances and Disease Registry

DATE: March 3, 2011

SUBJECT: Smokeless Tobacco Nicotine Report

Issue

The Centers for Disease Control and Prevention (CDC) is pleased to present the Smokeless Tobacco Nicotine Report. This report provides an analysis of the quantity of nicotine in smokeless tobacco products, as reported by the tobacco industry. Additional information on moisture content, pH, and unionized nicotine (also known as “un-ionized” or “free base” nicotine) is also presented.

Secretarial Action

Please provide your approval or notification of non-approval of the Smokeless Tobacco Nicotine Report by March 31, 2011.

BACKGROUND

The Comprehensive Smokeless Tobacco Health Education Act (CSTHEA), 15 U.S.C. §4403, requires individuals who manufacture, package, or import smokeless tobacco products in the United States to report to the Department of Health and Human Services (HHS) the quantity of nicotine in each smokeless tobacco product. CDC’s Office on Smoking and Health (OSH) has primary responsibility for the HHS tobacco and health program.

Pursuant to CSTHEA, 15 U.S.C. §4403, the information contained in the report must be treated as trade secret or confidential information subject to 5 U.S.C. 552(b)(4). Procedures for safeguarding the data and the report, Guidelines for Maintaining and Releasing Privileged Information Obtained in Accordance With Sec. 4(b)(2)(A) of Public Law 99-252 (15 U.S.C. 4403), were previously published in the February 1, 1994, Federal Register (59 FR 4714) (attached).

We hope that you find this report informative. CDC is available to meet with you to discuss future opportunities for using the scientific data contained in the report. Considering that tobacco regulation is a priority for HHS, this report could have important implications for other HHS agencies. CDC is also available to discuss additional steps for sharing this information outside of HHS, within the constraints of the legislative requirements. Additionally, CDC is interested in discussing future reporting schedules of these data.

Thomas R. Frieden, MD, MPH

Attachments:

Tab A – Smokeless Tobacco Nicotine Report

Tab B – 15 U.S.C. 4403

Recommendation 1:

Approval of the report will allow... [Continue your recommendation here, including positive and negative impacts, if any.]

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments: _____

Recommendation 2:

Non-approval of the report will result in... [Continue your justification here, including positive and negative impacts, if any.]

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments:

Kathleen Sebelius
Secretary

Sample HHS/IOS/ES Transmittal Memo

TO: The Secretary
Through: DS _____
COS _____
ES _____

FROM: Director, Centers for Disease Control and Prevention

DATE: July 25, 2011

SUBJECT: Action: Review/Clear – Approval Tests and Standards for Closed-Circuit Escape Respirators (CCERs) (42 CFR 84); Final Rule

ACTION NEEDED

Review/clear of Approval Tests and Standards for Closed-Circuit Escape Respirators (CCERs) (42 CFR 84); Final Rule

SUMMARY

Audience: The regulated entities for this rule are respirator manufacturers (3) who make closed circuit respirators (CCERs) used for escaping atmospheres considered to be immediately dangerous to life and health.

Purpose: This final rule addresses problems that have been identified by NIOSH and users regarding CCERs. The rule will result in approved CCERs that provide improved protection over those currently approved under the existing regulatory provisions and will facilitate the introduction of new technologies.

Distribution: After approval by OMB, this rule will be published in the *Federal Register*.

Release Date: This rule is listed in the Spring 2011 Unified Agenda (RIN 0920-AA10). Anticipated publication date is December 30, 2011. This rule is not included in the retrospective review. The rule would become effective 60 days after publication in the *Federal Register*.

Background: Under 42 CFR Part 84, NIOSH conducts a testing and certification process to certify respirators manufactured for the protection of employees potentially exposed to hazardous atmospheres. NIOSH and the Mine Safety and Health Administration (MSHA) jointly certify such respirators for use by U.S. coal miners, including a type of respirator known in the mining industry as a “self-contained self-rescuer,” and more generally described by NIOSH as a CCER. Recent incidents in U.S. coal mines, while not necessarily implicating CCERs, have led to heightened concern about the safety of coal miners. This final rule is responsive to these concerns.

This rulemaking is not significant in terms of its potential economic impact. NIOSH has consulted with the Small Business Administration, which has approved the economic analysis presented in the final rule. However, the change from providing certification of the duration of breathing gas supplied to providing certification of a volume quantity of oxygen supplied is a significant policy

change. It will require changes in MSHA regulations governing CCER use in underground coal mining, which currently reference durations of breathing gas supply. It will also promote a shift in practices at coal mines, where miners and operators are accustomed to relying for emergency planning on the 1-hour duration certification of CCERs, which is required by MSHA for mine disaster escape use.

Public comments were generally positive about the rulemaking, but did reflect concerns about the need for new CCER standards; the change from duration to capacity ratings; and the decision to update CCER standards exclusively rather than all types of self-contained self-rescuers. Most significantly in response to public comments, NIOSH removed a provision that would have required all CCER purchasers to discontinue use of currently approved CCERs within six years of the rule's effective date. Concerns were raised about the ability of manufacturers to supply newly approved products in sufficient quantity to replace all currently deployed CCERs within the proposed six-year period. The Federal agencies with workplace safety regulatory authority (e.g., MSHA) govern the use of respirators in workplaces and would be in a superior position after implementation of this rule to consider product availability in allowing or curtailing the continued use of currently deployed CCERs.

RECOMMENDATION

I recommend that you sign the attached Final Rule: Approval Tests and Standards for Closed-Circuit Escape Respirators (42 CFR 84).

Thomas R. Frieden, MD, MPH

Attachment:

Approval Tests and Standards for Closed-Circuit Escape Respirators (42 CFR 84) Final Rule

Decision:

Approved: _____

No: _____

Would like to be briefed before signing: _____

Other/Comments:

Kathleen Sebelius
Secretary

APPENDIX G: THE EXECUTIVE SECRETARIAT CLEARANCE PROCESS

Any correspondence requiring the signature of the Director or Deputy Directors, CDC; the Assistant Secretary for Health and Surgeon General, HHS; the Deputy Secretary, HHS; the Secretary, HHS; or the President of the United States must be reviewed and cleared by CDC's Division of Executive Secretariat.

When CIOs draft response letters or memoranda that have to be signed by any of these people, the drafts must be sent back to the Division of Executive Secretariat within the following time frames:

- **Director's signature** 5 days
- **Deputy Director's signature** 5 days
- **Secretary's signature** 3 days

If CIOs are asked to reply to the senders directly, they have 5 working days to respond. CIOs are responsible for obtaining the proper signature(s), dating the response, and mailing the document. CIOs should then forward a copy of the signed, dated, final copy to the Division of Executive Secretariat so that the file can be closed.

Also, when CIOs initiate letters or memoranda that have to be signed by the above-mentioned people, these documents must be submitted in draft form (i.e., double-spaced) to the appropriate Executive Secretariat contact person for clearance and processing. To find your CIO's contact person, visit <http://intranet.cdc.gov/od/ocs/resources.htm> or call (404) 639-7120. The draft must contain the proper approvals at the CIO OD level.

GLOSSARY OF TERMS

Acronym. Word formed from the initial letters of a series of words, such as CDC. Acronyms do not have periods between the letters.

Active Voice. See *Voice*.

Alignment. See *Justification*.

Attachment. Additional material attached to a memo.

Audience. Person(s) who will read the document. Audience can be specialized and have considerable knowledge of the topic, generalized and have little or no knowledge of the topic, or a combination. Knowing the audience can help the writer craft a useful, understandable message.

Body. Main block of text in a document, as opposed to titles, addresses, and signatures.

Bullet. Small marker generally used instead of numbers to create lists. Bullets separate material into easily understandable chunks.

- This is a typical bullet.

Contraction. Word formed by combining two words and using an apostrophe, such as we'll. Because contractions are informal, they should not be used in correspondence.

Dash. Punctuation mark. There are two types of dashes: the en dash (–) and the em dash (—). An en dash indicates ranges (e.g., 1990–1995, 10%–20%). An em dash indicates a break in thought or sentence structure (e.g., He came to the meeting— for the first time ever—and spoke up). See also *Hyphen*.

Enclosure. Additional material enclosed with a letter.

Expletive. Word or phrase that brings no meaning to the sentence (i.e., there is, there are, and it is). Avoid using expletives.

Font. Complete set of letters, numbers, and symbols available in one type or typeface. See also *Typeface*.

Function Keys. Keys named F1 through F12 located on the top row of the keyboard. Function keys activate specific computer commands, and may also be referred to as F keys.

Header. Identifying information at the top of each page in a document. The first page usually does not have a header.

Hyphen. Punctuation mark (–) used between the parts of a compound word or name (e.g., high-fiber diet, Myers-Briggs type indicator). See also *Dash*.

Jargon. Technical language of a specialized group. Avoid jargon.

Justification. Text alignment on the page. Fully justified text is aligned at both the left and right margins. Text that is justified left or right means that the text is aligned at the left-hand or right-hand margin. A margin that is justified on the left side only is also called a ragged right margin.

Layout. Manner in which all the elements that make up a document are placed on a page. An effective layout guides the reader's eyes through the page smoothly, increasing readability and retention.

Letter. Formal correspondence sent outside CDC.

Memorandum/Memo. Brief communication that contains directive, advisory, or informative matter and that is distributed within CDC or sent to HHS. The plural is memorandums or memoranda.

Nominalization. Use of nouns instead of verbs (e.g., the document includes a list of all projects, instead of “the document lists all projects”). Avoid nominalizations.

Page Formatting. Elements affecting the look of the page, such as headers, margin size, and line spacing.

Paragraph. Sentence or group of sentences treating a single topic. Paragraphs are separated by blank lines and are not indented.

Passive Voice. See *Voice*.

Plain Language. Way of writing that is clear and simple because the document is visually appealing, organized logically, and understandable the first time it is read. The Plain Writing Act of 2010 requires that federal agencies communicate clearly.

Style. Way a document is written. Style is a combination of characteristics such as the choice and arrangement of words and ideas.

Tone. Manner of expression that reflects the writer’s attitude toward the reader. The tone of a letter should always be courteous, respectful, and polite.

Toolbar. Row of buttons and icons at the top of the Word or Outlook screen. The toolbar lets you access frequently-used commands.

Typeface. Family of individual fonts. “Times New Roman” and “Arial” are the two standard typefaces used at CDC.

Voice. Attribute of a verb that indicates whether the subject is active (Mr. Marsh wrote the letter) or passive (the letter was written by Mr. Marsh).

Watermark. Text or graphic that appears greyed-out in the background of a document.

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Reference Manuals

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The AMA is CDC's preferred reference for scientific writing. Online at www.amamanualofstyle.com.

Merriam-Webster's Collegiate Dictionary. 11th Edition. Springfield, Mass: Merriam-Webster, Inc., 2008.
CDC's preferred dictionary. Abridged version available online at www.merriam-webster.com.

Sabin WA. *The Gregg Reference Manual*. 11th ed. New York (NY): McGraw-Hill; 2011.
This manual is the standard guide for correspondence rules.

Strunk M, White EB. *The Elements of Style*. 4th ed. New York (NY): Longman; 2000.
This essential classic reference book is also available at www.bartleby.com/141/.

The Chicago Manual of Style. 16th Edition. Chicago: University of Chicago Press, 2010.
CMOS is CDC's preferred reference for non-technical writing. Online at www.chicagomanualofstyle.org/.

The U.S. Government Style Manual. 30th ed. Washington, DC: United States Government Printing Office; 2008. www.gpoaccess.gov/stylemanual/browse.html.
Although it differs at times from CDC style, the federal style guide is another helpful resource.

Useful Websites

www.plainlanguage.gov

Link to most recent federal plain language guidelines and other resources to help you improve your writing.

<http://brandidentitystandards.cdc.gov/>

Learn about CDC's brand and identity.

<http://intranet.cdc.gov/cdcweb/usability/508/>

Learn about Section 508 compliance for the Web.

www.yourdictionary.com

Check spelling and definitions.

http://oxforddictionaries.com/page/betterwriting_us/better-writing

Address questions pertaining to language, grammar, writing, and more.

www.chicagomanualofstyle.org

Use CDC's preferred reference for non-technical writing.

<http://wsuonline.weber.edu/wrh/words.htm>

Learn the difference between words that are often confused (e.g., critique/criticize, who/whom).



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