

The Book of Style for Medical Transcription

THIRD EDITION

SAMPLE

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Published by the Association for Healthcare Documentation Integrity
(formerly AAMT)

Chapter 2: Editing the Record

Introduction

If transcriptionists were only required to “type what they hear” and apply the standards as outlined throughout this book, the role would be a relatively straightforward and unencumbered one. There are some in health care who advocate this kind of restricted role for documentation specialists, embracing a “verbatim” transcription policy that limits the MT to transcribing only what is dictated, whether right or wrong, and flagging discrepancies for review by the dictator. In most environments, however, there is the expectation that the MT will be actively engaged in the diagnostic story-telling of the patient encounter, noting discrepancies in grammar, style, and clinical information, and correcting those discrepancies that fall within the scope of the MT’s knowledge and informed judgment. Certainly, routing discrepancies back to the dictator that could have been reasonably corrected by the transcriptionist has a direct impact on turn-around time and reimbursement. Such a restrictive policy for editing and correction can be costly to the facility and burdensome to the medical records department who has to facilitate those corrections. A skilled, engaged MT partners with the physician to ensure an accurate, timely, and secure record.

AHDI recognizes that MTs are *not* engaged in provision of patient care and cannot be expected to have insight into the patient encounter beyond what is provided by the dictator. However, many discrepancies encountered in dictation represent areas of obvious error where correction falls within the scope of the interpretive skill set and clinical knowledge of the MT. (See Appendix B—Statement on Verbatim Transcription.)

Transcriptionists who find themselves in a verbatim environment will have no choice but to comply with facility policy, and the ability of those MTs to engage in informed editing and impact risk management will be extremely limited. In those settings, an MT must stay within the guidelines of the verbatim standard, but AHDI urges even those MTs to be proactive in advocating for the role of the skilled MT in ensuring accurate capture and formatting of healthcare data.

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2.1 When to Edit

A patient's record is an important story, one that needs to accurately reflect the exchange of information that occurred between the provider and the patient during that encounter. Preserving the tone and scope of that encounter, while ensuring the accuracy of the data being captured, is critical to creating a long-term care record that is historically and clinically meaningful. The *art* of managing information that ensures this outcome falls within the skill set of the transcriptionist. Honoring a physician's dictation style, recognizing error or inconsistency in the record, correcting errors appropriately, refraining from correcting or altering what cannot be confirmed, and notifying the provider of errors that cannot be corrected are all part of protecting the *integrity* of the patient care encounter.

Trend Note: The computerized translation by a speech recognition engine of dictated material results in text that usually needs considerable editing. This is sometimes done on the front end by the originator but more often by a back-end speech recognition editor (an experienced medical transcriptionist) who will review the text while listening to the original audio file to ensure that the data has been captured and formatted appropriately. The same editing guidelines outlined below that apply to transcription editing equally apply to editing a speech-recognized draft.

2.1.1 Grammar/Punctuation

Edit errors in grammar and punctuation, including dictator-provided instructions related to paragraph breaks and punctuation. Dictators, especially those who speak English as a second language, may struggle with effective grammar and appropriate punctuation. Common errors include poor subject-verb agreement and transposition of personal pronouns. Be careful also to listen for errors in pluralization, especially where Latin and Greek plurals are concerned, and edit appropriately.

EXAMPLE

D: The anterior and posterior views of the chest was normal.
T: The anterior and posterior views of the chest were normal.

D: The patient had multiple diverticuli in the transverse colon.
T: The patient had multiple diverticula in the transverse colon.

2.1.2 Syntax

Syntax refers to the appropriate arrangement of words in a sentence. Word order is important to ensuring clarity of communication. Often, in the haste

of dictation, providers will unwittingly dictate sentences with gross errors in syntax. While the result can be humorous, it is critical for the transcriptionist to edit these errors so that they do not lead to misinterpretation of meaning. ESL physicians are particularly prone to errors in syntax, as their native grammar structures often vary greatly from English syntax. While the vocabulary and concepts may be accurate, they will often need assistance from the MT in ensuring appropriate word order and avoiding misplaced modifiers. Edit errors in syntax to ensure clarity of communication.

EXAMPLE

D: The patient developed a puffy right eye that was felt to be secondary to an insect bite by the ophthalmologist.

T: The patient developed a puffy right eye; this was felt by the ophthalmologist to be secondary to an insect bite.

D: CT scan showed there was nothing in the brain but sinusitis.

T: CT scan of the brain showed only sinusitis.

2.1.3 Spelling

While electronic spell checkers can be tremendously helpful in identifying and correcting misspelled words in the record, transcriptionists should not rely on those resources alone, nor should the transcriptionist rely on dictator spelling of new terms, medications, equipment, or instruments *unless* that term cannot be located or verified in any reputable resource. In that instance, it is best to spell the term as provided by the dictator and flag the report for verification (See 2.4.3—*Flagging the Report*). For all misspelled words for which a correct spelling can be verified, the transcriptionist should edit that term appropriately.

2.1.4 Slang, Jargon, and Brief Forms

Modern medicine is constantly evolving and so is its language. In addition, with the fast pace of American health care, clinicians sometimes find themselves dictating their notes on the fly, before they have had a chance to put their thoughts together. The result may be an awkward use of language and frequent neologisms. Edit inappropriate slang words and phrases, keeping in mind that many words start out as coined or slang terms but later evolve through usage to eventually become acceptable words in the American medical lexicon.

To include a list of acceptable and unacceptable slang word, brief form, or jargon would be virtually impossible. Transcriptionists should consult a reputable

industry reference book or resource to verify what terms are acceptable in their shortened or altered forms and which terms should be edited.

Sometimes a noun or adjective is used as a verb. If possible, edit awkwardly created verbs.

EXAMPLE

D: Stool was guaiac'd.
T: Stool guaiac test was done.

Likewise, if possible, edit proper nouns dictated as verbs.

EXAMPLE

D: The baby was de-lee'd on the abdomen.
T: The baby was suctioned on the abdomen using a DeLee.

Jargon refers to special language that is used and fully understood only by members of a particular craft, trade, or profession. Like other jargons, that of healthcare professions parallels, but only slightly overlaps, formal technical terminology. It consists partly of lay and technical terms to which special meanings are assigned. It is largely unrecorded in reference books and is highly informal, including some expressions that are slangy and humorous. Medical jargon tends to be particularly imprecise and may be offensive and derogatory.

EXAMPLE

D: urines
T: urine samples

D: premie
T: premature infant

D: orthopod
T: orthopedic surgeon

Leave blank and flag obscenities, derogatory or inflammatory remarks, and double entendres (words or word combinations, symbols, and abbreviations that have varying, and usually inappropriate, meanings) except when these are purposefully dictated by the author as part of a direct quote. In instances

where the inclusion is easily edited, do so to avoid misinterpretation or the retention of an inappropriate abbreviation or term.

EXAMPLE

D: He is complaining of some SOB.
T: He is complaining of some shortness of breath.

Brief forms are shortened forms of common words that are acceptable to transcribe in abbreviated format. These are discussed more fully in Chapter 9. Consult a reputable industry reference or resource when attempting to determine whether a dictated abbreviated form is an acceptable brief form or is potentially an unacceptable slang, jargon term, or back formation.

Examples of acceptable brief forms:

EXAMPLE

exam
lab
monos, basos, lymphs, eos
prep

Examples of unacceptable brief forms:

EXAMPLE

appy (appendectomy)
crit (hematocrit)
epi (epinephrine)

2.1.5 Back Formations

Back formations are new words formed by altering an existing word (usually a noun). Back formations are often verbs but may appear as adjectives or adverbs. They are frequently encountered in medical dictation. Use dictated back formations if they have become acceptable through widespread use. Avoid absurd back formations or ones that will be confusing to the reader. It is difficult to say which back formations will become accepted; this is ultimately determined by usage. False verbs and other back formations are increasingly prevalent in the communications industry and technical world, but they should be used judiciously in transcribed health records.

Examples of back formations that have evolved to acceptable and common usage:

EXAMPLE

diagnosis—to diagnose
Bovie—bovied

Examples of back formations that are not acceptable and should be edited appropriately:

EXAMPLE

dehiscence—to dehisce
torsion—to torse
diuretics—to diurese

2.1.6 Incorrect Terms

Edit incorrectly dictated English and medical terms when the intended meaning is unquestionably clear. This requires a transcriptionist to have skilled interpretive judgment and the ability to recognize any ambiguity related to a dictated term or phrase (*See 2.2.1—Critical Thinking versus Guessing*). If there is any doubt, leave a blank and flag the report.

EXAMPLE

D: At the time of discharge, the patient was feeling much better and no longer had a temperature.
T: At the time of discharge, the patient was feeling much better and no longer had a fever.

Note: In the above example, temperature was changed to fever because it would be clinically erroneous to describe a patient, particularly one being discharged, as having no temperature. While it is common for people, even dictators, to use these terms interchangeably, clarity of communication dictates that the appropriate word (in this case *fever*) be used instead.

EXAMPLE

D: The baby was delivered over an intact peritoneum.
T: The baby was delivered over an intact perineum.

2.1.7 Contextual Inconsistencies

Many contextual inconsistencies have to be flagged and referred to the dictator for verification, but some contextual inconsistencies can be resolved by a critically thinking transcriptionist. If, for example, the physician clearly identifies the patient as a female in the opening statements of the history, accidental references to the patient as “he” or “him” elsewhere in the report should be edited by the transcriptionist and do not require notification of the dictator. Some ESL dictators (for example, those who are native to the Philippines) struggle with personal pronouns because such pronouns do not exist in their native languages. Likewise, it is common for a dictator to dictate erroneous directional and positional terms (like *left* and *right*), and when a clear delineation is evident in the record, the transcriptionist should edit appropriately. Do not guess. If in doubt, leave a blank and flag the report.

2.1.8 Transposition of Terms and Values

It is not uncommon for a dictator to accidentally transpose words or values in the haste of dictating. When it is extremely clear that those terms have simply been flipped or transposed, edit them appropriately. If there is any ambiguity or doubt about the transposition of those terms or the correlation of values to the appropriate terms, leave a blank and flag the report. Many transposed terms can be left unedited, as they do not alter meaning, nor do they impact grammatical structure. However, some clinical and diagnostic phrases are typically expressed in a specific order and have common abbreviations associated with that word order. When those types of phrases contain transposed terms, edit them appropriately to reflect the common phrase.

EXAMPLE

D: Hemoglobin 42, hematocrit 17.

T: Hemoglobin 17, hematocrit 42.

D: Vaginal laparoscopic-assisted hysterectomy

T: Laparoscopic-assisted vaginal hysterectomy (LAVH)

2.1.9 Demographics

Accurate patient demographics are critical to managing health information, and every attempt should be made to ensure that accurate patient demographics (as defined by the facility) have been captured in the documentation process. Some demographics, like medical record number and date of service, are manually entered by the dictator via the technology interface. Others are dictated by the physician. Both capture methods are fraught with error, and in settings where the transcriptionist has access to the patient chart, chart man-

agement system, or Admission/Discharge/Transfer (ADT) data, the transcriptionist should refer to that data when selecting or transcribing demographics. Do not rely solely on dictator spelling of patient names nor the dictated or manually entered medical record numbers, chart numbers, dates of birth, or dates of service.

Trend Note: With most modern dictation platforms and many ASP models, the demographic or ADT information is captured automatically by the system at the point of dictation and electronically associated with the transcribed record. Transcriptionists working under those models are often required to verify what has been captured by the ADT feed against the information being dictated by the physician to ensure accurate demographic mapping. In settings where this is not automatic, the MT may have to manually access this information to verify demographics.

2.2 How to Edit

Error recognition is only the first step in ensuring accurate data capture. Managing those errors requires the transcriptionist to be engaged in critical thinking that has been shaped by knowledge of clinical terminology and the diagnostic process. The skilled, engaged transcriptionist should engage all of the strategies below for appropriate and informed editing.

2.2.1 Critical Thinking versus Guessing

Transcriptionists should approach the editing process from the position of informed judgment. An MT should never guess when interpreting what has been dictated or the accuracy of a term, phrase, or reference in the record. Only in instances where the transcriptionist's interpretive skill and experience have shaped a high degree of accuracy and confidence in the appropriate areas of editing (as outlined above in section 2.1) should the MT be permitted to proceed with editing those areas. Postgraduate transcriptionists and new hires should be watched closely to evaluate consistency in error recognition and interpretive judgment. In instances where even a skilled transcriptionist cannot confidently edit an error or inconsistency, the MT should leave a blank and flag the report.

2.2.2 Clarifying Content

Be proactively engaged in capturing a patient encounter by paying close attention to the entire narrative and the information that has been relayed about the patient. Encountered errors or questionable inclusions can often be clarified

by content elsewhere in the report. When attempting to interpret a dictated term or phrase, search for context clues that will facilitate an informed editing decision.

2.2.3 Dictator Style

Editing what has been dictated to reflect grammatical or clinical accuracy should be done in a subtle and nonintrusive manner. In general, MTs should not edit syntax or diction unless it represents an error or potential for misinterpretation. Just because a sentence can be better worded does not mean that it is wrong. When editing phrases, terms, and syntax, do so with respect for dictator style and employ the least intrusive strategy for correction.

2.2.4 Access to Ancillary Records

Refer to the patient's record to clarify or correct content in dictation. In settings where the transcriptionist has access to the patient chart or previous records, refer to those records for verification of information when needed. In settings where access to those records is restricted, the transcriptionist should leave a blank and flag the report.

2.3 When Not to Edit

As important as the ability to accurately edit errors and inconsistencies in the record is the ability to recognize and acknowledge those instances when it is inappropriate for a transcriptionist to engage in editing or altering the dictated record. The objective of quality assessment programs is to ensure that transcriptionists not only know when and how to edit, but when *not* to edit, and confidence in the skills of an MT is often based on whether that MT knows what to do when he/she cannot edit or are unsure of how to handle a questionable area of the record.

2.3.1 Missing/Inaudible Dictation

In any area of the record where the dictation is missing, has been cut off, is complicated by extraneous noise, is inaudible, or is hindered by the speed or poor articulation skills of the dictator, the transcriptionist should not attempt to guess unless the missing term or phrase is extremely obvious (see below). In most instances, the only option is to leave a blank and flag the report.

EXAMPLE

D: Temperature 98.6, pulse 60, and <garbled dictation> 122/77.

T: Temperature 98.6, pulse 60, and blood pressure 122/77.

D: The patient was sent home on <garbled dictation> and will follow up in the office.

T: The patient was sent home on _____ and will follow up in the office.

2.3.2 Irreconcilable Words and Phrases

When every attempt has been made by the transcriptionist to research a questionable term or phrase and reputable resources have been consulted with no verification, the transcriptionist should leave a blank and flag the report, even in instances where the term or phrase was specifically dictated and/or spelled by the physician.

2.3.3 Contradictory Information

In instances where there is clearly contradictory information in the record that cannot be clarified contextually or in ancillary records, the transcriptionist should leave a blank and flag the report.

2.3.4 Direct Quotes

When the dictator provides information in the form of a direct quote, the transcriptionist should be careful not to edit that information, as the dictator may be intentionally including incorrect terms or references that were stated by the patient.

EXAMPLE

D: The patient believes her husband may have early quote old timer's disease unquote.

T: The patient believes her husband may have early "old timer's disease."

not:

T: The patient believes her husband may have early "Alzheimer disease."

2.3.5 Negative Findings

Never delete negative or normal findings if dictated. To do so could potentially imply that those areas were not evaluated. Remember that a negative or normal finding is a finding, often as diagnostically significant as a positive finding.

2.4 Notification and Flagging

The standard process for notifying either the quality assurance department or the provider of an error or inconsistency in the record is to leave a blank and flag the report to the attention of an accountable party who will need to review that blank and correct it.

2.4.1 Blanks

Leave a blank space in a report rather than guessing what was meant or transcribing unclear or obviously incorrect dictation. In many instances, leaving a blank means including an underlined section equivalent to the perceived length of questionable content. In other instances, it may mean leaving a blank space or a text marker or tag that can be searched for by the QA person who will review the flag (see examples below). Transcriptionists should defer to facility/client preference for managing flagged areas of the record.

EXAMPLE

The patient came in today complaining of _____ for the last 3 days.
The patient came in today complaining of _____ for the last 3 days.
The patient came in today complaining of ### for the last 3 days.

2.4.2 Audio Indexing

With many dictation systems, it is now possible to index the dictation or audio file at points where there is a question or potential error in the record. This enables QA personnel to jump quickly to that portion of the dictation to resolve flagged issues. On proprietary transcription systems, it is also possible for the indexed audio file to be automatically linked to the blank or tag in the record. This greatly facilitates the QA and review process, and transcriptionists should defer to company or facility procedures for audio indexing.

2.4.3 Flagging the Report

At one time, flagging simply referred to the process of leaving a note at the end of the record that would draw the attention of medical records personnel and/or the physician to a blank or inconsistency in the record. The term has taken on the additional meaning of electronically marking a report for review. When flagging a report to draw attention to unclear or incorrect dictation, cite the page, section, and line number, tagging the error on paper or electronically.

If the word or phrase is unfamiliar, note what it sounds like. If the term is inconsistent, briefly state why, as below.

EXAMPLE

A left below-knee amputation is later referred to as a right BK amputation.
Please review and verify.

Punctuation

Introduction

Punctuation marks function to make the expression of language more easily read and understood. Unlike all other elements of language, punctuation only asserts itself in the written word and thus plays a vital role in the *visual* expression and interpretation of language. In many instances, punctuation marks serve to separate or otherwise clearly delineate the appropriate flow of words, thoughts, and concepts, in many instances functioning to set apart certain information from the rest of the sentence or to indicate a connection between two or more concepts. Punctuation also functions to convey tone in written language, as in the use of question marks and exclamation points, to provide the emphasis normally intoned in the spoken language.

The role of punctuation in clinical documentation is no different than in any other form of written expression. Clarity of communication should always be the guide in the application of concepts in this chapter. The unique challenge faced by the transcriptionist is in exercising informed judgment when punctuating. Unlike other standards outlined in this text, appropriate punctuation is expected of the MT even in a verbatim environment, whether dictated by the provider or not. It is also important to note that while providers may attempt to provide appropriate punctuation as part of the dictation process, a transcriptionist should never rely on the provider in the decision to include or exclude punctuation marks—again, even in a verbatim environment.

A Note About Quality Assurance: While punctuation errors have their place in all quality measurement systems, including the guidelines outlined by AHDI in the *Metrics for Measuring Quality in Medical Transcription* standard, there are very few instances when the inclusion or omission of punctuating marks results in a compromise of clinical clarity or a potential risk to patient safety. Transcriptionists should *not* be unreasonably penalized for errors in punctuation that do not compromise the integrity of the document. Punctuation is not an absolute science, and there are many areas (particularly in the application of commas) where the process is somewhat subjective and there-

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6.8 Quotation Marks

- 6.8.1 Capitalization
- 6.8.2 Punctuation
- 6.8.3 Feet and Inches

fore open to interpretation and debate. Where punctuation is concerned, feedback given to transcriptionists in a quality-driven environment should focus primarily on clarity of communication and secondarily on mentoring MTs toward enhanced understanding of the principles and nuances of this complex arena of language.

Trend Note: The migration toward an electronic environment, where clinical data will be increasingly captured via disparate methodologies (i.e., speech recognition, point-and-click templates, etc.) will likely result in decreased focus/emphasis on extraneous symbols and punctuation marks in the record. In environments where the data being tagged and captured will be accessed, used, and displayed in user interfaces that are field-driven, the use/inclusion of punctuation will become irrelevant and unnecessary. AHDI maintains that regardless of the capture method, any resulting *documentation* created from captured data should continue to reflect not only clinical accuracy but also the application of quality standards outlined in this text, including the appropriate placement of punctuation. Transcriptionists working with emerging/enabling technologies in an electronic environment should defer to facility policy for the use/inclusion of symbols and certain punctuation marks, while still advocating for the preservation of quality standards in any resulting useable document.

6.1 Terminal Punctuation

Terminal punctuation refers to punctuation marks that terminate an independent clause or sentence. Each of the terminal punctuation marks—period, question mark, and exclamation point—serves to create a separation between one thought and the next. The period and question mark have other uses and applications outside of the terminal role, particularly in clinical language, and those uses are likewise outlined below.

6.1.1 Period

Use a period to mark the end of a sentence, either statement or command.

EXAMPLE

The patient presents to my office today for followup.
Pick up the pen, please.
She was prepped and draped in the usual sterile fashion.

Use a period at the end of an *indirect* question.

EXAMPLE

The patient asked whether she would have to be out of work for more than a week after the surgery.
He was less concerned about the details of the procedure; his question was about how his insurance would be billed.

Use a period to separate a whole number from a decimal fraction.

EXAMPLE

3.344
0.12
\$5.30

Use periods after the numbers or letters used to enumerate items in a list *unless* the numbers/letters are enclosed in parentheses.

EXAMPLE

DISCHARGE MEDICATIONS

1. Protonix daily.
2. Xanax p.r.n. nightly.
3. Allegra-D p.r.n. seasonal allergies.

but:

In contemplating tubal ligation, the patient should determine whether she (a) is confident she does not desire future pregnancy and (b) wants to have the procedure performed at the time of her C-section.

Use periods at the end of each item in a list when those items are essential to the grammatical completeness of the statement introducing the list.

EXAMPLE

The patient is instructed to:

1. Go home and elevate the arm for the next 24–36 hours.
2. Take Darvocet q.4 h. p.r.n. pain.
3. Follow up in my office on Monday for bandage check.

In the list above, each item completes the opening sentence introduced by the word *to*. Often the physician will transition away from a list like that above

and return to dictating in narrative sentences. When that occurs, the transcriptionist should begin a new paragraph or express the list above in paragraph form.

EXAMPLE

The patient is instructed to:

1. Go home and elevate the arm for the next 24-36 hours.
2. Take Darvocet q.4 h. p.r.n. pain.
3. Follow up in my office on Monday for bandage check.

I have told her that she should expect to return to work within a week unless there are unforeseen complications. She understands these instructions and will follow up as indicated.

or:

The patient is instructed to: (1) go home and elevate the arm for the next 24-36 hours, (2) take Darvocet q.4 h. p.r.n. pain, and (3) follow up in my office on Monday for bandage check. I have told her that she should expect to return to work within a week unless there are unforeseen complications. She understands these instructions and will follow up as indicated.

Periods are not needed at the end of each item in a list that does not represent a grammatical connection to the introductory statement.

EXAMPLE

The benefits of exercise are many:

1. Weight loss
2. Heart health
3. Stress relief
4. Improved sleep

In clinical documentation, lists like the one above are rarely encountered. The vast majority of enumerated lists seen in the health record represent information that follows a major report heading. In those instances, the heading functions as an implied form of an introductory statement for which each enumerated item is a grammatical completion. Thus, all enumerated lists in clinical documentation should include terminal periods at the end of each entry. In the list below, each item completes the opening sentence *implied* by the heading (*The discharge diagnoses are...*).

EXAMPLE

DISCHARGE DIAGNOSES

1. Status post myocardial infarction.
2. Status post balloon angioplasty with stent placement.
3. Chronic renal insufficiency, stable.
4. Chronic rheumatoid arthritis.

Likewise, when only one item follows the header, it serves the same role and should include a terminating period. In the example below, the item completes the opening sentence *implied* by the heading (*The discharge diagnosis is...*).

EXAMPLE

DISCHARGE DIAGNOSIS

Status post myocardial infarction with balloon angioplasty and stent placement.

The only exception to this rule is when the single-item or enumerated list represents a list of people's names, such as physicians, surgeons, specialists, etc. Do *not* include a period in those instances.

EXAMPLE

ATTENDING PHYSICIAN

George A. Smith, MD

SURGEONS

1. John D. Frazier, MD
2. William Douglas, DO

Use periods with lowercased abbreviations and acronyms, whether English or Latin.

EXAMPLE

etc.
p.r.n.
pp.
q.6 h.
et al.

Trend Note: Many language and style sources, including the *AMA Manual of Style*, have transitioned to dropping periods in most lowercased Latin abbreviations, like legal abbreviations (*et al*, *eg*, *ie*, *viz*, *etc*), and literary reference abbreviations (*p*, *pp*), but recommend the retention of periods in abbreviations used in treatment and drug dosing instructions (*p.r.n.*, *q.i.d.*, *q.4 h.*, etc.). Transcriptionists should defer to facility preference.

Do *not* use periods with uppercase abbreviations and acronyms, including titles and credentials that may have required periods at one time. It is no longer common practice to include periods with those abbreviations.

EXAMPLE

MD
CMT
CABG
CAD
aVL

Do *not* use periods with abbreviated personal and courtesy titles unless it is known that the person in question prefers the inclusion of a period or periods. While the use of periods in these instances is still acceptable, there continues to be a strong trend toward dropping them and their omission is now preferred. Defer to facility preference.

EXAMPLE

John A. Smith Jr
Ms Emily Williams
Dr Edward Jones
Walter W. Adams III

Do *not* use periods with abbreviated units of measure.

EXAMPLE

mg
g
mL
mmHg
mm/h

6.1.2 Question Mark

Use a question mark at the end of a direct question.

EXAMPLE

Are you sure you need this procedure?
Does he want to go with us?
Who is responsible for this catastrophe?

Use a question mark to indicate a question within a direct quote.

EXAMPLE

The patient asked me, "How long will I be out of work?"
He merely said "huh?" when I asked him to describe his symptoms.

Do *not* use a question mark within a quotation if it is the overall sentence that poses the question and not the direct quote itself. Place the question mark at the end of the sentence, not the end of the quoted material.

EXAMPLE

Did she really say "leave me alone"?
How many times did he yell "help"?

In healthcare documentation, it is common for a provider to indicate the use of a question mark to imply uncertainty about a diagnosis. This should be transcribed as dictated, using an actual question mark in the area indicated.

EXAMPLE

D: Diagnosis...question mark idiopathic thrombocytopenic purpura.
Transcribed:
DIAGNOSIS
?idiopathic thrombocytopenic purpura.

Do *not* use the question mark when the physician dictates "question of" or "questionable."

EXAMPLE

There is a question of pigmented nevus versus melanoma.
not:
There is ?pigmented nevus versus melanoma.

6.1.3 Exclamation Point

The use of exclamation points in health records is extremely rare, except in the instance of a direct quote, and the use of them outside of a direct quote, even if dictated, is discouraged since they tend to inject an inflammatory tone to the record that is inappropriate and informal. In dictation, the only time this would require editorial insight is if the physician actually dictates the words “exclamation point” at the end of a sentence (as opposed to discerning that implication from his/her tone).

EXAMPLE

D: The patient is 103 years old!

T: The patient is 103 years old.

D: I strongly advised that she be admitted for testing, but the patient signed out against medical advice!

T: I strongly advised that she be admitted for testing, but the patient signed out against medical advice.

6.2 The Comma—Separating

Commas essentially serve two purposes in the English language: (a) to set off nonessential elements (*See 6.3 The Comma—Setting Off*) and (b) to *separate* elements of an expression in order to clarify their relationship with each other. A separating comma is a *single* comma that serves as a divider between two elements—digits, words, phrases, and clauses.

6.2.1 Adjectives

Use a comma to separate two or more adjectives modifying the same noun.

EXAMPLE

This well-developed, well-nourished woman presented to my office for evaluation. (two adjectives modifying “woman”)

I explained that we would be using a safe, quick-acting anesthesia for her outpatient procedure. (two adjectives modifying “anesthesia”)

Exception: In clinical documentation, commas are frequently omitted from the series of demographic descriptors used to identify the patient—most often seen in the opening statements of the history and/or physical examination sections of the report. This string of descriptors, including the patient’s age,

race, and gender, are generally treated as a single unit, and omitting commas in those instances is acceptable and increasingly preferred.

EXAMPLE

This is a 40-year-old African American male patient with a history of sickle cell anemia.

not:

This is a 40-year-old, African American, male patient with a history of sickle cell anemia.

On examination, she is a 2-year-old white female who is sleeping in her mother's arms.

not:

On examination, she is a 2-year-old, white female who is sleeping in her mother's arms.

When those descriptors include other general adjectives to describe the patient, apply commas to only those items. To omit commas in those instances results in a string of adjectives that becomes too long and visually confusing.

EXAMPLE

This is a well-developed, well-nourished 40-year-old African American male patient with a history of sickle cell anemia.

On examination, she is an adorable, engaging 2-year-old white female.

6.2.2 Items in a Simple Series

Use a comma to separate two or more items in a *simple* series, where none of the items contain internal commas. Do *not* use a comma if all the items are joined by *and* or *or*. Always use a serial comma before the conjunction *preceding* the final item in your series (a, b, and c). It is still acceptable in some sources to omit the serial comma, but both AHDI and the AMA recommend inclusion of that comma for clarity.

EXAMPLE

Dermatologic examination revealed macules, papules, and several small pustules.

The patient is to go home, follow a clear liquid diet for the next 24 hours, transition slowly to a regular diet, and follow up in my office next week.

but:

She complained of nausea and vomiting and some intermittent headache.

Note: To avoid clutter and confusion, use parentheses instead of commas or dashes to set off a series that describes what precedes it.

EXAMPLE

The patient had multiple complaints (headache, nausea, vomiting, and fever) and demanded to be seen immediately.

preferred to:

The patient had multiple complaints—headache, nausea, vomiting, and fever—and demanded to be seen immediately.

6.2.3 Independent Clauses

Use a comma to separate two independent clauses in a compound sentence that are joined by a conjunction (*and, but, or, nor, or for*). Each independent clause is underlined below to delineate that each represents a complete thought that is capable of standing alone.

EXAMPLE

He was brought to the operating room, and he was prepped and draped in the usual sterile fashion.

She brought her previous films with her to my office today, but I did not find her mammography films to be included in the envelope.

Be careful not to confuse a complex sentence with a compound verb. If no new subject is introduced after the conjunction, you likely have a compound verb, *not* a compound sentence. In those instances, a comma should *not* precede your conjunction.

EXAMPLE

He was brought to the operating room and was prepped and draped in the usual sterile fashion.

not:

He was brought to the operating room, and was prepped and draped in the usual sterile fashion. (This implies that "was prepped and draped in the usual sterile fashion" can stand alone as an independent clause)

6.2.4 Introductory Elements

Use a comma to separate introductory elements (words, phrases, and clauses) from the independent clause that follows it.

EXAMPLE

Yes, I can deliver that message for you. (introductory word)

Under the influence of hallucinogenic drugs, the patient jumped from his second-story window and fractured his leg. (introductory prepositional phrases)

Taking the risks and benefits into consideration, the patient has opted to undergo the procedure. (introductory gerund phrase)

Before she arrived in the emergency room, she told EMS that she was hearing voices. (introductory dependent clause)

Do *not* use a comma after most introductory adverbs or short phrases that answer the questions *when*, *how often*, *where*, and *why*.

EXAMPLE

Tomorrow we will admit her to Memorial Hospital for tests.

Every morning the patient walks two miles.

Occasionally he feels short of breath when climbing a flight of stairs.

For that reason we will admit her.

6.2.5 Numbers

Use a comma to separate groups of three numerals in numbers of 5 digits or more, but omit the commas if decimals are used. The comma in 4-digit numbers may be omitted.

EXAMPLE

Platelet count was 345,000.

12345.67

White count was 7100.

or:

White count was 7,100.

Do not place commas between *words* expressing a number.

EXAMPLE

Four hundred forty-eight
not:
Four hundred, forty-eight.

Trend Note: The *AMA Manual of Style* recommends compliance with SI convention, whereby digits are separated by a “thin space,” not a comma, to indicate place values beyond thousands. However, this recommendation pertains primarily to the formal publication of clinical data in periodicals, abstracts, and scientific journals. Transcriptionists who are asked to prepare manuscripts of this nature should be aware of this standard. Due to the compromise of visual clarity that omission of separating commas would create as well as the as-yet lack of widespread adoption of this standard, this recommendation has *not* been made for healthcare records. With the continued movement toward SI convention, however, it is possible that even health records will see a migration to this standard in the future.

EXAMPLE

4055
13 445
722 654
8 473 308

Use a comma to separate adjacent unrelated numbers if neither can be expressed readily in words. However, it is preferred that the sentence be recast to avoid the confusion of adjacent numerals. The example below represents an instance where both numbers are too large to be readily expressed in words. Recast the sentence, if possible, as below. In a verbatim environment where recasting is prohibited, a separating comma is the only option.

EXAMPLE

In March of 2002, 2038 patients were seen in the emergency room.
better:
In March of 2002, there were 2038 patients seen in the emergency room.

6.2.6 Dates

Use a comma to separate the day of the month from the year when the full date is expressed.

EXAMPLE

I last saw her in my office on March 28, 2004.
He retired from the Navy on April 10, 2007.

Do *not* use a comma when only the month and year are given.

EXAMPLE

I last saw her in my office in March 2004.
He retired from the Navy in April 2007.

When the full date (month, day, and year) occur in mid-sentence, use a comma to separate the year from the rest of the sentence.

EXAMPLE

I last saw her on March 28, 2004, in my office.
He retired on April 10, 2007, from the Navy.

6.2.7 Titles

Do *not* use commas to separate a person's name from titles such as *Jr* and *Sr* and roman or arabic numerals following a person's name.

EXAMPLE

She will be referred to Dr. James Baker Jr for further evaluation.
John Edwards Sr's surgery will be scheduled for tomorrow.

Do *not* use commas to separate *Inc.* or *Ltd.* from a business name unless it is known that the entity in question prefers the separating comma.

EXAMPLE

Time Inc. has been in the publication business for many years.

6.2.8 Geographic Names and Addresses

Use a comma to separate a city and state, city and country, or state and country. Use a comma to separate the state or country from the rest of the sentence.

EXAMPLE

The patient moved to Modesto, California, 14 years ago.
The patient returned from a business trip to Paris, France, the week prior to admission.

When expressing a complete address as part of a sentence, use a comma to separate the street address from the secondary address information (suite, apartment number, etc.), to separate the secondary address from the city, and to separate the city from the state. Do *not* use a comma to separate the state and zip code. Use a comma to separate the zip code from the remainder of the sentence that follows it.

EXAMPLE

We will send the laboratory results to her at 750 East Adams Street, Apt. 401, Pasadena, CA 91104, once we receive them in our office.

In correspondence or other instances where the complete address is displayed in block style, use the following format:

EXAMPLE

Ms Susan Smith
750 East Adams Street, Apt. 401
Pasadena, CA 91104

6.2.9 Genetics

Use a comma to separate the chromosome number and sex chromosome in genetic expression. Place the comma without spacing between these numbers.

EXAMPLE

The normal human karyotypes are 46,XX (female) and 46,XY (male).
The test was positive for 47,XX,+21, or Down syndrome.

6.2.10 Units of Measure

Do *not* use a comma to separate two or more measures whose units are the same dimension (weight, volume, time, etc.).

EXAMPLE

The patient is 2 years 4 months 3 days old.
Apgars were normal and weight was 8 pounds 12 ounces.
She was able to tolerate exercise for 10 minutes 22 seconds.

6.2.11 Dialogue

Use a comma to separate direct dialogue from the rest of the sentence. The comma should precede the opening quotation marks when information introduces the quoted dialogue. The comma should fall *inside* the closing quotation marks when the remainder of the sentence follows the quoted dialogue.

EXAMPLE

At the start of the examination, the patient made the point of saying, "I don't want a pelvic exam."
"I don't want a pelvic exam," the patient made a point of saying.

6.2.12 Omitted Word(s)

Use a comma to separate two parts of an independent clause to indicate the omission of a word or phrase whose meaning is implied. In most instances, this occurs in the second of two sentences to avoid repeating the same word or phrase.

EXAMPLE

In test group 1, the duration of treatment was too short; in test group 2, too long. (The comma indicates the omission of "the duration of treatment was.")
She said she was experiencing a drop in blood pressure in the morning; at night, an elevation. (The comma indicates the omission of "she was experiencing.")

6.2.13 Laboratory Values

Use commas to separate values of a single panel or test. Use periods to separate the values of unrelated laboratory tests. In the example below, the CBC values are grouped together in one sentence; the chemistry values in another.

EXAMPLE

LABORATORY DATA: White count 5.2, hemoglobin 15, and hematocrit 39.
Sodium 149, potassium 4.2, and chloride 103.

6.3 The Comma—Setting Off

The second function of the comma is to set off nonessential expressions that interrupt the flow of the sentence from subject to verb or verb to complement. Nonessential expressions are words, phrases, and clauses that are not necessary for the grammatical correctness or structural integrity of the sentence.

6.3.1 Basic Rules for Nonessential Expressions

Identifying a nonessential expression can often be confusing to transcriptionists who sometimes misinterpret this to mean that the information contained within a nonessential clause is not important information. The question of whether information is essential or nonessential has very little to do with whether that information is inherently important and more to do with whether it is necessary for the sentence it resides in to have unhindered meaning and structural integrity.

EXAMPLE

We will get the opinion of Dr. Smith, who has expertise in this area, prior to proceeding with surgery. (nonessential)
We will get the opinion of someone who has expertise in this area prior to proceeding with surgery. (essential)

In the examples above, the fact that the individual in question has “expertise” is inarguably important information, *but* it does not have the same impact on the integrity of the sentence around it in each instance. It is nonessential *to the sentence* in the first example, because it merely provides additional information about Dr. Smith, who is specific and *essential* enough to the meaning of the sentence not to require the information that follows it. In the second sentence, the clause in question becomes absolutely essential because it adds specificity that the word “someone” does not adequately provide. Setting off a nonessential word, phrase, or clause implies that it can be removed from the sentence

without compromising meaning or structural integrity. To remove the clause in the second sentence would create a compromise of meaning, whereby not enough specific information is given.

EXAMPLE

The person who drives the patient to all her appointments is her daughter.

(essential—tells which person)

She presents today with her daughter, who drives the patient to all her appointments. (nonessential—further describes “daughter”)

The medication that we thought would benefit her most was Protonix.

(essential—tells which medication)

We prescribed Protonix, which we thought would benefit her the most. (nonessential—additional information about “Protonix”)

Note: The word “that” most often introduces *essential* clauses, and the word “which” most often introduces *nonessential* clauses.

6.3.2 Interrupting Elements

Use commas to set off words, phrases, and clauses that interrupt the flow of the sentence.

EXAMPLE

Mary, I believe, has already been seen in the Coumadin clinic.

She will, if possible, bring her previous films with her on her next visit.

We could, perhaps, ask Dr. Smith to see her.

The patient has been told to follow up with me in the office or, if he cannot get to the office, by phone.

6.3.3 Appositives

Use commas to set off an appositive, or expression that provides additional, nonessential information about a noun or pronoun that immediately precedes it.

EXAMPLE

Jerry Edwards, her husband, has power of attorney for the patient.

My first suggestion, to start her on steroid treatment, was met with immediate opposition by the patient.

Open reduction with internal fixation, which is really her only reasonable option at this point, will be scheduled for Thursday.

6.3.4 Afterthoughts

Use commas to set off words, phrases, and clauses that are loosely added onto the end of the sentence, often expressing the opinion or tone of the speaker.

EXAMPLE

This baby is very healthy, isn't he?

The patient was supposed to chart her premenopausal symptoms, if I recall.

Take the patient to outpatient radiology, please.

6.3.5 Transitional Words and Phrases

Transitional expressions are called such because they exist in the second of two related sentences and help the reader transition from the thought or idea expressed in the first sentence to the thought or idea expressed in the second sentence. These transitional expressions can be *complementary* (as with *therefore* and *subsequently*) or *contrasting* (as with *however* and *on the other hand*). Use a comma or commas to set off transitional expressions (*however*, *therefore*, *on the other hand*, *subsequently*, etc.) when they occur in the middle or at the end of the second sentence. When the transitional expression *introduces* the second clause, use a comma to separate the transitional expression from the rest of the sentence.

EXAMPLE

The patient was given D50 in normal saline. Subsequently, she became more responsive.

or:

The patient was given D50 in normal saline; subsequently, she became more responsive.

but:

The patient was given D50 in normal saline. She became, subsequently, more responsive.

or:

The patient was given D50 in normal saline. She became more responsive, subsequently.

The most common misapplication of this rule in transcription occurs with the word *however*, which providers dictate with extreme frequency. It is important to recognize this word as a transitional expression and evaluate its position (introductory, interrupting, or terminating) in the *second* of the two related sentences being expressed. Either a period or semicolon can be

used to separate the sentences, but neither terminal punctuation mark has any bearing on the position or role of the transitional word in the second sentence.

EXAMPLE

She was brought to the emergency room in cardiac arrest. Despite all exhaustive efforts, however, we were unable to resuscitate her. (interruptive)

She was brought to the emergency room in cardiac arrest. Despite all exhaustive efforts, we were unable to resuscitate her, however. (terminating)

She was brought to the emergency room in cardiac arrest; however, despite all exhaustive efforts, we were unable to resuscitate her. (introductory)

not:

She was brought to the emergency room in cardiac arrest, however, despite all exhaustive efforts, we were unable to resuscitate her.

In the final example above, setting off the word *however* with commas would result in a faulty construction that would imply that the expression is nonessential and could be removed. Also, do not use transitional words as conjunctions. They do not function in a linking role.

EXAMPLE

She was given Tylenol; however, her headache did not improve.

not:

She was given Tylenol, however her headache did not improve.

6.4 Colons and Semicolons

These major marks of punctuation serve many important roles. Despite how frequently they are used in common communications, they have many critical uses in healthcare documentation.

6.4.1 Colon

The primary function of the colon in punctuation is to introduce a list, series, or enumeration. Place a colon before such expressions as *for example*, *namely*, and *that is* when they introduce words, phrases, or a series of clauses. (see examples next page)

EXAMPLE

I have offered the patient several options for treatment: namely, conservative observation, medical management, and surgical intervention.

There are many benefits to association membership: for example, networking opportunities, access to industry news and information, professional resources, and product discounts.

When a sentence uses anticipatory expressions such as *the following*, *as follows*, *thus*, and *these*, use a colon to separate the sentence from the list or series that follows it.

EXAMPLE

The following medications were suggested to the patient to alleviate her symptoms: Tylenol, Bayer, and Aleve.

He is to go home with discharge instructions as follows: (1) Drink clear liquids and advance diet as tolerated, (2) Use Phenergan p.r.n. nausea and vomiting, and (3) Follow up in my office in one week.

Do *not* use a colon to introduce words that fit properly into the grammatical structure of the sentence without the colon: for example, after a verb, between a preposition and its object, or after *because*.

EXAMPLE

The patient is on Glucophage, furosemide, and Vasotec.
He came to the emergency room because he was experiencing fever, chills, and nausea.

Use a colon in standard expressions of time. Do *not* use a colon in expressions of military time.

EXAMPLE

2:30 p.m.
8:00
9:45 a.m.
but:
1500
1435 hours
0930

Use a colon in place of the word *to* in the expression of a ratio. Do *not* use a virgule, dash, hyphen, or other mark for this purpose.

EXAMPLE

Mycoplasma 1:2
Cold agglutinins 1:4
Zolyse 1:10,000

Use *to* or a hyphen instead of a colon when expressing the ratio using words or letters instead of values; use the colon only when expressing the values associated with the ratio.

EXAMPLE

I-to-E ratio
Myeloid-to-erythroid ratio
FEV-FVC ratio
but:
Myeloid-to-erythroid ratio was 10:1.
or:
Myeloid-to-erythroid was 10:1.

Use a colon to separate a title and subtitle of an article or publication.

EXAMPLE

In his article *Premenstrual Syndromes: What Every Clinician Should be Asking*, Dr. Sims discusses the fundamental symptoms associated with PMDD.

David Veillette, FACHE, is the author of *Hospitals in Crisis: A Digital Solution*.

Use a colon to separate volume number and page number in footnotes, end notes, and cited sources.

EXAMPLE

10:520-595 (meaning Volume 10, pages 520 through 595)

6.4.2 Semicolon

Use a semicolon to separate two independent clauses. While independent clauses are typically separated by periods, a semicolon can be used when the two clauses express closely linked or related concepts or ideas.

EXAMPLE

She presents today complaining of extreme fatigue; walking from one room to the next can completely exhaust her.
Over half of my patients opt for hormone replacement therapy; the rest prefer alternative treatments.

As stated above in 6.3.5—*Transitional Words and Phrases*, semicolons are most often used to separate two independent clauses that are linked in concept by a transitional expression.

EXAMPLE

She was prescribed a Z-Pak for her URI; however, she called today because her symptoms have not resolved.

Use a semicolon to separate two independent clauses linked by a transitional expression such as *for example* (e.g.), *namely*, or *that is*. Do not confuse the use of the semicolon here with the use of the colon outlined in 6.4.1—*Colon* when a list or enumeration follows these expressions.

EXAMPLE

The patient is an ideal candidate for this study; that is, he meets the qualifications for history and risk factors.
Her questions were focused on one area of concern; namely, who is going to perform the procedure?

Use semicolons to separate items in a *complex* series, or a series in which at least one of the items in the series contains internal commas. Separating the items with semicolons provides visual clarity and ease of reading from one item in the series to the next.

EXAMPLE

The patient received Cerubidine 120 mg daily 3 times on February 26, 27, and 28, 2002; received Cytosar 200 mg IV over 12 hours for 14 doses beginning February 26; and received thioguanine for 14 doses, for a total dose of 200 mg a day, starting February 26.

6.5 Hyphens

The primary role of hyphens in general language is for word division and in compound expressions, though many other uses in scientific language will be encountered by the medical transcriptionist or editor.

6.5.1 Word Division

Hyphens are used to divide words between syllables when the word does not fully carry to the next line of text. It is important to note that word division is rarely employed in medical transcription anymore since modern word processing programs and transcription platforms function on automatic word wrapping, making it unnecessary for the transcriptionist to bother with word division. However, in those rare instances where an MT may still be working in an environment that requires it, the general rules are outlined below.

- Divide words only between syllables. Consult a reputable dictionary or resource when uncertain of proper syllabic division.
- Do not divide one-syllable words.
- Do not set off a one-letter syllable at the beginning of the word.
- Do not divide a word unless you can leave a syllable of at least three characters on the first line and carry a syllable of at least three characters to the next line.
- Do not divide abbreviations.
- Divide compound words between the words forming the compound.
- Divide a hyphenated compound at the point of hyphenation.
- Divide a word *after*, not *within*, a prefix.
- Divide a word *before*, not *within*, a suffix.
- When possible, divide at the prefix or suffix point rather than in the root.
- When a one-letter syllable occurs in a word, divide *after* that syllable.
- Do not divide words in more than two consecutive lines of text.
- Do not divide at the end of the first line or end of the last full line of a paragraph.
- Do not divide the last word on a page.

6.5.2 Compound Modifiers

Perhaps no other area of language causes greater confusion than the application of hyphens in compound modifiers. The rules for retaining the compounding hyphen when the elements of the compound do *not* precede the nouns they modify depend greatly on (a) a keen understanding of parts of speech, and (b) an ability to determine the role of those compound elements when they are cast away from their nouns.

A *compound modifier*, or compound adjective, consists of two or more words that function as a unit and jointly modify a noun or pronoun. An important reminder is that the words that make up the modifier may or may not be adjectives themselves. It is only when they are combined with other words that the resulting compound becomes a single adjectival expression modifying a noun or pronoun. Compound modifiers are derived from and take the place of adjectival phrases and clauses.

EXAMPLE

<u>Adjective Phrase/Clause</u>	<u>Compound Adjective</u>
window <i>that is on the second floor</i>	second-floor window
mass <i>whose density is high</i>	high-density mass
a gown <i>that is as long as the floor</i>	floor-length gown
display <i>that catches the eye</i>	eye-catching display

Hyphenate *all* compound modifiers when they precede and modify a noun or pronoun.

EXAMPLE

scholarly-looking *patient*
second-floor *office*
finger-to-nose *test*
good-natured *female*
well-developed, well-nourished *woman*
fast-acting *medication*
low-frequency *waves*
high-power *field*

In general, *do not hyphenate* these compound expressions when they occur elsewhere in the sentence *if* they no longer function in an adjectival role; in other words, if the expression no longer functions as an adjective modifying a noun and functions instead as some other part of speech, the hyphenation should be dropped. The types of compounds that tend to drop their hyphenation are those formed with adverbs and participles, whereby the participle transitions back to its primary role as a verb.

EXAMPLE

<u>Before the Noun</u>	<u>Elsewhere in Sentence</u>
an <u>up-to-date</u> history (compound modifier)	We brought her history <u>up to date</u> . (prepositional phrase)
a <u>cause-and-effect</u> relationship (compound modifier)	There is a relationship of <u>cause and effect</u> in this case. (object of the preposition)
an <u>off-the-record</u> comment (compound modifier)	Her comment was <u>off the record</u> . (prepositional phrase)
a <u>well-developed</u> female (compound modifier)	The patient is <u>well developed</u> . ("is developed" is the verb; "well" is the adverb modifying the verb)
a <u>fast-acting</u> medication (compound modifier)	The medication is <u>fast acting</u> . ("is acting" is the verb; "fast" is the adverb modifying the verb)
<u>second-floor</u> office (compound modifier)	The office is on the <u>second floor</u> . (object of the preposition)
<u>random-access</u> memory (compound modifier)	This computer allows <u>random access</u> to stored data. (direct object of the verb)

Do hyphenate compound modifiers that occur elsewhere in the sentence *if* they continue to function as modifying compounds. This almost always occurs when the compound modifier follows a linking verb and functions as a *predicate adjective* modifying the noun or pronoun subject of the sentence.

EXAMPLE

The patient is good-natured and soft-spoken. (compound predicate adjectives modifying "patient")
The forceps were bone-biting. (compound predicate adjective modifying "forceps")
I found the patient to be panic-stricken. (compound predicate adjective of the infinitive "to be" modifying "patient")
I work part-time. (compound adverb; answers "when")
This commitment will be long-term. (predicate adjective modifying "commitment")

Do not use a hyphen in a compound modifier to link an adverb ending in *-ly* with a participle or adjective. In those instances, the adverb functions to modify the adjective or participle, *not* to serve in a compound role.

EXAMPLE

recently completed workup
moderately acute pain
financially stable investment

Do not use a hyphen in a compound modifier if the compound modifier is preceded by an adverb.

EXAMPLE

somewhat well nourished patient
reasonably well articulated history
very well written essay

Some compound modifiers are commonly used together, or are so clear, that they are automatically read as a unit and do not need to be joined with a hyphen.

EXAMPLE

dark brown lesion
deep tendon reflexes
jugular venous distention
left lower quadrant
low back pain

Do not use hyphens with most disease-entity modifiers even when they precede the noun. Check appropriate medical references for guidance.

EXAMPLE

cervical disk disease
oat cell carcinoma
pelvic inflammatory disease
sickle cell disease
urinary tract infection
but:
insulin-dependent diabetes mellitus
non-insulin-dependent diabetes mellitus
non-small-cell carcinoma

Trend Note: The term *non-small-cell carcinoma* is an example of one of those terms that is evolving away from hyphenation. Many sources are beginning to cite *nonsmall-cell carcinoma* as an acceptable expression.

Use a hyphen with two or more eponymic names used as multiple-word modifiers of diseases, operations, procedures, instruments, etc.

EXAMPLE

Osgood-Schlatter disease (*named for US orthopedic surgeon Robert B. Osgood and Swiss surgeon Carl Schlatter*)

but:

Chevalier Jackson forceps (*named for Chevalier Jackson, US pioneer in bronchoesophagology*)

Use a hyphen to join two adjectives that are equal, complementary, or contrasting when they precede or follow the noun they modify.

EXAMPLE

anterior-posterior infarction
physician-patient confidentiality
attorney-client privilege
blue-green eyes

Do *not* hyphenate foreign expressions used in compound adjectives, even when they precede the nouns they modify (unless they are always hyphenated).

EXAMPLE

in vitro experiments
carcinoma in situ
cul-de-sac (*always hyphenated*)
ex officio member

Use a hyphen to form a compound modifier between a number and a word if it precedes and modifies a noun. When the word represents a unit of measure, hyphenate *only* when the unit is an English unit of measure, which is spelled out in full. Do *not* hyphenate compound modifiers if the unit of measure is an abbreviated metric unit, where neither the numeric value nor the unit of measure constitutes an actual *word* with which a compound can be formed. (*see examples next page*)

EXAMPLE

3-week history
2-year-old female
8-pound 5-ounce baby girl
2-inch laceration
but:
3 cm incision
5 mg dosage
5 x 3 x 2 cm mass

Note: This represents a change over previous recommendations in the 2nd edition of this text. Per SI convention and metric standards, no intervening symbols or punctuation should interrupt the flow from numeric value to metric unit, even in a modifying relationship. This is an application that should not have been implied by the standards for compound modifiers. In addition, compound modifiers should be formed by *at least* one complete word, and metric value expressions do not meet that criterion.

Use a hyphen to clarify meaning and to avoid confusion, absurdity, or ambiguity in compound modifiers. The hyphen may not be necessary if the meaning is made clear by surrounding context.

EXAMPLE

large-bowel obstruction (*obstruction of the large bowel*)
large bowel obstruction (*large obstruction of the bowel*)
single-specialty clinic (*facility devoted to one specialty*)
single specialty clinic (*single facility devoted to a specialty*)

Use a hyphen or en dash to hyphenate a compound modifier formed with a one-word modifier or prefix. In these instances the prefix is hyphenated to clearly communicate a modifying relationship with the entire compound and not just the first word.

EXAMPLE

non-disease-entity modifier
not:
nondisease-entity modifier (no such thing as "nondisease")

non-insulin-dependent diabetes mellitus
not:
noninsulin-dependent diabetes mellitus (no such thing as "noninsulin")

6.5.3 Compound Nouns and Verbs

Some compound words are written without hyphenation, some are written separately, and some are joined by hyphens. In the evolution of a newly coined combined word, an expression typically starts out as a hyphenated compound and gradually over time and through widespread usage will evolve into a single entity without hyphenation. Transcriptionists should refer to a reputable dictionary or resource when unsure as to whether a compound word is expressed as a single word or with hyphenation.

EXAMPLE

attorney at law
beta-blocker
chief of staff
father-in-law
half-life
life span
air bag
paper clip
homeowner
workstation
crossroad
free-fall
money-maker
school board

Use a hyphen to join two nouns that are equal, complementary, or contrasting.

EXAMPLE

blood-brain barrier
fracture-dislocation

Do not hyphenate proper nouns of more than one word, even when they serve as a modifier preceding a noun.

EXAMPLE

South Dakota residents
United Airlines pilot

Do not use a hyphen in a combination of proper noun and common noun.

EXAMPLE

Tylenol capsule administration
Bovie cauterly hemostasis

Use a hyphen with all compound nouns containing *ex-* when *ex-* means *former* and precedes a noun that can stand on its own.

EXAMPLE

ex-wife
ex-president

Most compound verbs are hyphenated or are one word. Refer to a reputable dictionary or resource for hyphenation. If unable to locate a compound verb in the dictionary, hyphenate the components.

EXAMPLE

to baby-sit	to downgrade
to double-space	to highlight
to test-drive	to troubleshoot
to second-guess	to pinpoint

Do *not* use a hyphen in compound verbs that are formed with a preposition, like *up*, *in*, *down*, etc.

EXAMPLE

I am going to make up that test next week.
He will slow down his exercise for the next few weeks.
She will follow up with me on Monday.

When the compounds above are used as nouns, they drop their hyphenation and become joined compounds. When they function as adjectives, they should be hyphenated. In some instances, as with *followup* and *followthrough*, both the adjective and noun forms have dropped their hyphenation and have become single compounds, though the hyphenated form (*follow-up*) is still acceptable when used as an adjective.

EXAMPLE

She has a followup (or follow-up) appointment with me on Tuesday.
She will be seen in followup on Tuesday.

I am going to take a make-up test next week.

6.5.4 Numbers Spelled Out

When expressing numbers in words, hyphenate all compound numbers between 21 and 99 (or 21st and 99th), whether they stand alone or are part of a number over 100. Of note, the only instance where numbers would be spelled out like this in healthcare documentation would be when a number occurs at the beginning of a sentence that cannot be recast.

EXAMPLE

twenty-one
forty-three million
seven hundred thirty-five

When there is more than one acceptable expression, choose the simplest form for clarity of communication.

EXAMPLE

fifteen hundred
not:
one thousand five hundred

6.5.5 Serial Numbers

Use hyphens in the expression of serial numbers (medical record numbers, social security numbers, etc.).

EXAMPLE

MR#: 05-38-9964
SSN: 111-22-3333

6.5.6 Fractions

Use hyphens to express fractional numbers that are combined with whole numbers, whether spelled out or expressed with numerals.

EXAMPLE

2-1/2 inches
3-3/4 hours
three-fourths of the bottle
two-thirds majority

6.5.7 Ranges

Use a hyphen in place of the word *to* in range expressions if all of the following five conditions have been met: (1) the phrases *from...to*, *from...through*, and *between...and* are *not* used, (2) decimals and/or commas do not appear in the numeric values, (3) neither value contains four or more digits, (4) neither value is a negative, and (5) neither value is accompanied by a symbol.

EXAMPLE

Our new office hours will be 1-4 p.m. Tuesdays and Thursdays.
Systolic blood pressures were in the 150-180 range.
BP was 120-130 over 80-90.
There were 8-12 wbc's per high-power field.

See 6.7.2—*Meaning “Per” or “Over”* for ranges that are combined with *over* expressions.

6.5.8 Prefixes and Suffixes

Do *not* use a hyphen after common prefixes except when they precede a proper noun, a capitalized word, or an abbreviation: *ante-*, *anti-*, *bi-*, *co-*, *contra-*, *counter-*, *de-*, *extra-*, *infra-*, *intra-*, *micro-*, *mid-*, *non-*, *over-*, *peri-*, *pre-*, *post-*, *pro-*, *pseudo-*, *re-*, *semi-*, *sub-*, *super-*, *supra-*, *trans-*, *tri-*, *ultra-*, *un-*, and *under-*.

EXAMPLE

antimicrobial
posttraumatic
overproduction
comorbidity
preoperative
perimenopausal

Use a hyphen after a prefix when the unhyphenated word would have a different meaning.

EXAMPLE

re-creation, recreation
re-treat, retreat
un-ionized, unionized

Use a hyphen after a prefix or before a suffix to avoid an unusual or awkward combination of letters, as in repetitive vowels or three of the same consonants sequentially.

EXAMPLE

anti-inflammatory
bell-like
de-emphasize

Note: Be careful to check a reputable dictionary or resource when using words like those above. Again, as language evolves, many of these words drop their hyphenation. A number of industry resources already cite *antiinflammatory* without hyphenation, though the hyphenated form is still acceptable.

6.5.9 Suspensive Hyphens

Use a *suspensive* hyphen after each incomplete modifier when there is a series of two or more hyphenated compounds that have a common last word, or base.

EXAMPLE

10- to 12-year history
3- to 4-inch incision
full- and split-thickness grafts
1st-, 2nd-, and 3rd-trimester symptoms

Do *not* use a suspensive hyphen with a stand-alone prefix that precedes an unhyphenated prefix compound.

EXAMPLE

We will perform a preoperative and postoperative evaluation.

not:

We will perform a pre- and postoperative evaluation.

This test will usually determine if a patient is hypertensive or hypotensive.

not:

This test will usually determine if a patient is hyper- or hypotensive.

6.5.10 Single Numbers, Symbols, or Letter Compounds

Some terms with a single letter or symbol followed by a word are hyphenated; others are not. Check appropriate references for guidance, and consider the use of hyphens in such terms as optional if you are unable to document. Even if such terms are not hyphenated in their noun forms, they should be hyphenated in their adjectival forms.

EXAMPLE

B-complex vitamins

T wave, T-wave abnormality

B-cell helper

J curve

Z-plasty

T-shirt

I beam

Do *not* hyphenate modifiers in which a letter or number is the second element.

EXAMPLE

grade A eggs

study 1 protocol

type 1 diabetes mellitus

6.6 Parentheses, Braces, and Brackets

These marks are most often used to set off parenthetical expressions that are supplemental, but not essential, to the sentence. They are rarely used in transcription and should only be included in those instances where specifically directed to do so by the dictator.

6.6.1 Parentheses

Parentheses are used to provide parenthetical (incidental or supplementary) information that is not closely related to the rest of the sentence. They may or may not be dictated, and the transcriptionist should avoid using them unless they are dictated or they are the best choice for ensuring clarity of communication. It is better to use commas to set this information off.

EXAMPLE

A great deal of swelling was present (more so on the left than the right).
better:
A great deal of swelling was present, more so on the left than the right.

Punctuation should not precede or follow the parenthetical expression unless the sentence requires it.

EXAMPLE

The patient is improving (despite her repeated insistence that she is dying), and we plan to discharge her to an assisted living facility next week.

Punctuation should not be included *within* the parenthetical expression unless the expression requires it.

EXAMPLE

The regimen we started her on (atenolol, enalapril, and HCTZ) seems to be doing an adequate job of controlling her blood pressure.

Use parentheses to enumerate items within a sentence, separating the enumerated items by commas or semicolons.

EXAMPLE

He has a long history of known diagnoses, including (1) chronic silicosis, (2) status post left thoracotomy, and (3) arteriosclerotic cardiovascular disease.

6.6.2 Braces and Brackets

Brackets may be used around a parenthetical insertion within a parenthetical insertion. Follow the rules for parentheses.

EXAMPLE

The patient had had multiple complaints (headache, nausea, vomiting, and [he thought] fever) and demanded to be seen immediately.

Note: An author will often dictate “brackets” instead of “parentheses” in error.

Use brackets to express chemical concentration. When concentrations are expressed as percentages, use the percent sign rather than the spelled-out form and do not use brackets.

EXAMPLE

[HCO₃-] or [HCO₃-]
15% HNO₃ or HNO₃

When expressing chemical formulas, use parentheses for innermost units, adding brackets and then braces, if necessary.

EXAMPLE

chlorphenoxamine hydrochloride
2-[1-(4-chlorophenyl)-1-phenylethoxy]-N,N-dimethylethanamine
hydrochloride

hydroxychloroquine sulfate
7-chloro-4-{4-[ethyl(2-hydroxyethyl)amino]-1-methylbutylamino}-quinoline
sulfate

6.7 Virgule or Forward Slash (/)

The virgule, also known as *diagonal*, *slant line*, *slash*, or *solidus*, is used for a variety of purposes, particularly in the reporting of clinical data and scientific values. When dictated, the author will usually say “slash” or “forward slash.” However, there are many instances, as outlined below, where the virgule is indicated even when not dictated.

6.7.1 Equivalence/Duality

Virgules are often used to express equivalence—an instance where two terms are of equal weight in an expression. When the word *and* is implied between the expressions, a virgule (/) can be retained.

EXAMPLE

Her treatment/diagnostic planning was discussed with the therapist.
I had a long discussion with his sister/caregiver about home intervention.

When it comes to duality, or an instance where the word *or* is implied between the expressions, do *not* use a virgule.

EXAMPLE

Each patient was given his or her test results by phone.

Trend Note: The preference in these instances is increasingly to recast the sentence to use the plural in order to avoid sexist language.

EXAMPLE

The treatment regimen is one that any patient can follow on his or her own.
better:
The treatment regimen is one that patients can follow on their own.

6.7.2 Meaning *Per* or *Over*

Use a virgule for the word *per* when the following conditions have been met: (1) The construction involves at least one *metric* unit of measure, and (2) at least one element includes a specific numeric quantity.

EXAMPLE

The CD4+ cell count was 200/mcL.
Blood volume was 70 mL/kg of body weight.

Hemoglobin level was 14 g/dL.
but:
Hemoglobin levels are reported in grams per deciliter.

When these expressions involve *nonmetric* units of measure, spell out the word *per* and do not use the virgule, since the virgule implies an abbreviated expression and nonmetric units are abbreviated in the record. *Exception:* Use a virgule when the expression combines a metric unit with a nonmetric unit.

EXAMPLE

Heart rate was 120 beats per minute.

She takes 5 mg of Valium per day.

She weighs in 3 days per week.

but:

Her IV was set to run at 10 mcg/min while she was in the ER.

Do *not* use the virgule in place of *per* when a prepositional phrase intervenes between the two units of measure.

EXAMPLE

She was given 4.5 mEq of potassium per liter.

He was advised to take 81 mg of aspirin per day.

Do *not* use the virgule in place of *per* when neither element in the expression represents a unit of measure (when both elements are numeric) or when there are two numeric values accompanying different units of measure, particularly in drug concentration expressions. When the units differ or the units and/or elements are unknown, a virgule should not be used to imply direct relationship. *Exception:* If it can be confirmed that such an expression is part of the legally registered trademark for a medication, express the concentration with a virgule as indicated by the manufacturer.

EXAMPLE

The patient was prescribed Advair 250 per 50 b.i.d.

I called in a prescription for Hydro-Tussin HD 200 mg per 10 mL.

but:

I will start her on Nortrel 0.5/35 for pregnancy prevention and management of her PMS. (legally trademarked name)

Use a virgule to express *over* in certain relational expressions.

EXAMPLE

Blood pressure is 160/100.

There is a grade 1/4 murmur heard over the left sternal border.

When a range is combined with an *over* or *out of* expression, spell out the expression to avoid being misread as a fraction. Do not use a virgule to express the relationship.

EXAMPLE

Strength in the right extremity is 4 to 4+ over 5.

not:

Strength in the right extremity is 4-4+/5.

She described her pain as a 5 to 6 out of 10.

not:

She described her pain as a 5-6/10.

When a hyphen is used to express a range of two large numbers, express both numbers in their entirety, even if dictated in shortened expression, to avoid confusion or lack of clarity.

EXAMPLE

D: Platelet counts were 300 to 450 thousand.

T: Platelet counts were 300,000-450,000.

not:

T: Platelet counts were 300-450,000.

6.7.3 Dates

Virgules may be used to separate numerals representing the month, day, and year in tables and figures. This form may also be used for the date of service, operation, admission, or discharge when capturing patient demographic data as well as for dates dictated and transcribed at the bottom of the report.

EXAMPLE

DATE OF ADMISSION: 05/02/2007

DATE OF DISCHARGE: 05/04/2007

As above, the trend in most formal documentation is to reflect an 8-digit date when using virgule constructions (MM/DD/YYYY), but transcriptionists should defer to facility preference and user interface requirements.

In text, it is preferable to spell out dates in full, writing out the name of the month. However, if dates are used repeatedly and become cumbersome in the record, dates may be expressed using virgule constructions for visual clarity.

Likewise, some facilities have a strong preference for virgule construction in the record and do not want dates spelled out in full. In formal correspondence, they should always be spelled out. In narrative records, follow the guideline above where facility preference is unknown.

When only the month and day are dictated, it is preferable for the medical transcriptionist to add the year, *if known*.

EXAMPLE

D: The patient was seen on April 4th.

T: The patient was seen on April 4, 2000. (if date is known)

6.7.4 Fractions

Use a virgule to separate the numerator from the denominator in fractions.

EXAMPLE

4/5

2/3

1/2

Do *not* use a virgule to separate these elements when they are expressed as words, not numerals. Use a hyphen instead.

EXAMPLE

four-fifths

two-thirds

one-half

6.7.5 Visual Acuity

Express visual acuity with arabic numerals separated by a virgule.

EXAMPLE

Visual acuity is 20/200, corrected to 20/40.

6.8 Quotation Marks

Quotation marks are used most often in clinical documentation to capture a direct statement or comment from the patient or others involved in the patient's history. Place quotation marks at the beginning and end of each quotation, being careful to capture only those elements that represent a direct quote.

6.8.1 Capitalization

Begin a complete quotation with a capital letter if the quoted material represents an independent clause.

EXAMPLE

The pathology report reads, "Specimen is consistent with microadenoma." Despite my concern that she needed to be admitted, the patient adamantly refused admission, stating, "I don't trust hospitals, and I want to go home."

Do not capitalize the first word of a quotation if it represents a word, phrase, or dependent clause that has a grammatical relationship with the rest of the sentence.

EXAMPLE

She says that she has "bad blood."
The patient repeatedly mumbled the words "no needles" throughout the entire examination.

6.8.2 Punctuation

Punctuation marks typically fall inside the closing quotation marks to facilitate the unhindered punctuation of the sentence in which those quotations reside.

EXAMPLE

The patient stated that "the itching is driving me crazy," and she scratched her arms throughout our meeting.
The consultant's report reads, "The patient is a 21-year-old male referred to me by Dr. Wilson."
Despite previously being told she has "sugar diabetes," the patient's glucose levels continue to be within the normal range.

The exceptions to the rule above apply to the use of question marks, exclamation points, and semicolons. Semicolons should always fall outside the

quotation marks. However, to avoid this visually questionable construction, it is better to use other terminal punctuation, such as a period.

EXAMPLE

The patient clearly stated "no allergies"; however, his medical record states he is allergic to penicillin.

better:

The patient clearly stated "no allergies." However, his medical record states he is allergic to penicillin.

With question marks and exclamation points, their inclusion within the quoted material is dependent on meaning. Place the exclamation point or question mark inside the ending quotation mark if the material being quoted is being expressed as an exclamation or question. Place the exclamation point or question mark outside the ending quotation mark if the entire sentence, not the quoted material, represents the exclamation or question.

EXAMPLE

Patients frequently ask, "How long will I be out of work?"

She greeted me with "What's up?" when I entered her room.

Did she just say "help me"?

The patient yelled "No!" every time we came near him.

I want to walk into his office and say, "I quit!"

Stop saying "no"!

6.8.3 Feet and Inches

Do not use single or double quotation marks to represent feet and inches in dimensional expressions. Use the English units spelled out in full.

EXAMPLE

The patient is 5 feet 10 inches tall.

not:

The patient is 5'10" tall.

Hematology/Oncology

16.1 Hematology

Hematology is the branch of medicine that is concerned with the study of the blood—its formed elements, blood typing, hemostasis, etc.—and the identification and treatment of blood diseases and disorders.

16.1.1 Blood Groups/Types

Blood groups are determined by erythrocyte antigens that are identified as having common immunologic properties. There are over 600 recognized red blood cell antigens organized by the International Society of Blood Transfusion (ISBT) into groups which belong to approximately 29 systems. The most common blood group nomenclature is the *ABO system*, which is a simple alphabetic naming system for blood groups. This is almost exclusively the blood system encountered in healthcare documentation, though some of the other blood nomenclatures may be referenced in formal publication.

Use single or dual letters, sometimes with a subscript letter or number. If subscripts are not available, place the numeral immediately following and on the line with the letter.

EXAMPLE

group A
group A₁ or group A1
group A_{1B} or group A1B

Other systems: Other common blood group systems include Auberger, Diego, Duffy, Kell, Kidd, Lewis, Lutheran, Rh (not Rhesus), Sutter, and Xg. Consult laboratory references for guidance in expressing terms related to these and other blood groups.

16.1 Hematology

- 16.1.1 Blood Groups/Types
- 16.1.2 Erythrocytes
- 16.1.3 Leukocytes
- 16.1.4 Lymphocytes
- 16.1.5 Platelets and Hemostasis
- 16.1.6 Histocompatibility
- 16.1.7 Smears and Stains
- 16.1.8 Flow Cytometry

16.2 Oncology

- 16.2.1 Cancer Staging and Grading
- 16.2.2 Classification Systems
- 16.2.3 Chemotherapy Protocols
- 16.2.4 Radiation Therapy

Blood Types: Write out *negative* or *positive* rather than – or +, because the minus or plus sign is easily overlooked.

EXAMPLE

Her blood type is B negative.
She has a B-negative blood type.
not:
She has a B- blood type.

16.1.2 Erythrocytes

Diseases and conditions arising from red blood cell disorders comprise a significant portion of any hematology/oncology practice. Peripheral blood smears and red cell evaluation will typically involve identification of the quantity and morphology of red cells to diagnose erythrocyte disorders. Transcriptionists should be familiar with the terms used to describe red cell morphology:

EXAMPLE

spherocytes
anisocytosis
target cells
Howell-Jolly bodies
acanthocytes
megalocytes
stippling
crystals
stomatocytes
drepanocytes
Rouleaux

As part of a complete blood count (CBC), red cell quantification and function is evaluated. Abbreviations for red cell testing should be transcribed as dictated and do not require expansion.

EXAMPLE

RBC, rbc (acceptable for either *red blood cell(s)* or *red blood count*)
hemoglobin
hematocrit
MCV
MCH
MCHC
RDW

Hemoglobin and hematocrit: These values are often dictated “H and H” or “H over H.” For clarity, translate the abbreviations into their respective terms.

EXAMPLE

D: H and H 11.8 and 35.3.
T: Hemoglobin 11.8 and hematocrit 35.3.

When red cell counts are dictated as a percentage, transcribe as dictated. Do not add a percent sign (%) unless it is dictated.

EXAMPLE

D: MCHC 34 percent
T: MCHC 34%

16.1.3 Leukocytes

White blood cells are one of several types of formed elements in the blood and their primary role/function is in immune response to infection and foreign bodies. Each of the 5 leukocytes is present in a healthy human body in the following percentages:

EXAMPLE

neutrophils 65%
lymphocytes 25%
monocytes 6%
eosinophils 4%
basophils 1%

Knowing these baseline percentages is important in identifying a variation in these percentages and recognizing that such variations are often diagnostically significant. As part of a complete blood count (CBC), white cell quantification is evaluated. Abbreviations and brief forms related to white cell testing should be transcribed as dictated.

EXAMPLE

WBC, wbc (acceptable for either *white blood cell(s)* or *white blood count*)
PMNs, polys
neutrophils
basophils, basos
lymphocytes, lymphs
monocytes, monos
eosinophils, eos
basophils, basos
bands, stabs
segmented neutrophils, segs

Differential blood count: Part of a white blood cell count that includes polymorphonuclear neutrophils (PMNs, polys, segmented neutrophils [segs]), band neutrophils (bands, stabs), lymphocytes (lymphs), eosinophils (eos), basophils (basos), and monocytes (monos). Differential counts may be given as whole numbers or as percents; total should equal 100 in either case.

EXAMPLE

White blood count of 4800, with 58% segs, 7% bands, 24% lymphs, 8% monos, 1% eos, and 2% basos.
or:
White blood count of 4800, with 58 segs, 7 bands, 24 lymphs, 8 monos, 1 eo, and 2 basos.

16.1.4 Lymphocytes

T lymphocytes (T cells) and *B lymphocytes (B cells)* are the most common lymphocytes. T means thymus-derived, B means bursa-derived. In general, do not use the extended forms. Do not hyphenate except when used as an adjective preceding a noun.

EXAMPLE

T cells
T-cell count

Pre- and pan-: Use a hyphen to join *pre-* or *pan-* to the following letter or word.

EXAMPLE

pre-T cell
pan-B lymphocyte
pan-thymocyte

Subsets of T lymphocytes: Use a virgule (not a hyphen) to express helper/inducer and cytotoxic/suppressor subsets of T lymphocytes. Helper/inducer T lymphocytes are also known as helper cells or helper T lymphocytes. Cytotoxic/suppressor T lymphocytes are also called suppressor cells. Use a hyphen (not a virgule or colon) in the phrase helper-suppressor ratio.

EXAMPLE

helper-suppressor ratio
not:
helper/suppressor ratio
not:
helper:suppressor ratio

Surface antigens: Join arabic numerals (on the line) to the letter to express surface antigens of T lymphocytes.

EXAMPLE

T3
T8
T11

16.1.5 Platelets and Hemostasis

Hemostasis refers to the process of platelet plug formation (*primary hemostasis*) and coagulation or clotting (*secondary hemostasis*).

Transcribe *primary hemostasis* terms as dictated and refer to a reputable resource or dictionary to verify accurate expression of these when dictated in their abbreviated forms, as the use of mixed capital letters, lowercase letters, hyphenation, and arabic numerals can vary from one hemostatic term to the next. Some examples are provided below (*see next page*).

EXAMPLE

beta-thromboglobulin	BTG
diacylglycerol	DAG
glycoprotein VI	GpVI
inositol triphosphate	IP ₃
platelet activating factor	PAF

Secondary hemostasis primarily involves reference to terms related to clotting factors and variant factors. When transcribing *clotting factors*, lowercase *factor* and use roman numerals.

EXAMPLE

factor I	fibrinogen
factor II	prothrombin
factor III	thromboplastin
factor IV	calcium ions
factor V	proaccelerin
factor VI	(none currently designated)
factor VII	proconvertin
factor VIII	antihemophilic factor
factor IX	Christmas factor
factor X	Stuart factor/Prower factor
factor XI	plasma thromboplastin antecedent
factor XII	Hageman factor/glass factor
factor XIII	fibrin-stabilizing factor

Clotting factor variants: Abnormal or variant forms for clotting factors related to locations should be transcribed as dictated, with careful attention paid to the proper noun eponyms associated with many of these factor variants.

EXAMPLE

factor V Cambridge
factor V Leiden
factor X San Antonio
fibrinogen Paris
prothrombin Barcelona
prothrombin Himi I

Hemophilias: Transcriptionists should be familiar with the correlation between hemophilia classifications and associated clotting factor deficiencies.

EXAMPLE

hemophilia A	factor VII deficiency
hemophilia B	factor IX deficiency
hemophilia C	factor XI deficiency

von Willebrand (factor VIII): This glycoprotein is involved in coagulation and is deficient in von Willebrand disease. Express as dictated using the newer and preferred abbreviations and terminology below:

EXAMPLE

factor VIII
factor VIII:Ag
VII:c
vWF
vWF Ag
RCoF

In addition, von Willebrand *disease* is classified by variant using *type* and roman numerals.

EXAMPLE

type I
type IIA
type IIB
type III
Normandy 1 (use arabic numeral)

Complement factors are involved in antigen-antibody reactions and inflammation. Immediately follow a capital C, B, P, or D with an arabic numeral on the line.

EXAMPLE

C1
C7

Add a lowercase letter (usually *a* or *b*) for fragments of complement components.

EXAMPLE

C5a
Bb

Platelet factors: Use arabic numerals for platelet factors (abbreviation: *PF*).

EXAMPLE

platelet factor 3
PF 3 (Note: Space between PF and the numeral.)

Activated form: Add a lowercase *a* to designate a factor's activated form.

EXAMPLE

factor Xa

16.1.6 Histocompatibility

Human leukocyte antigens (HLA) are genetic markers on white blood cells. Just as red cell antigens determine blood type, HLA antigens determine tissue type. Express with capital-lowercase combinations and hyphens. Check appropriate references for guidance.

EXAMPLE

HLA-DR5	associated with Hashimoto thyroiditis
B8, Dw3	associated with Graves disease

Major histocompatibility complex, class I antigens:

EXAMPLE

HLA-D
HLA-DR

Major histocompatibility complex, class II antigens:

EXAMPLE

HLA-B27
HLA-DRw10

Examples of antigenic specificities of major HLA loci:

EXAMPLE

HLA-A
HLA-B
HLA-C
HLA-D

16.1.7 Smears and Stains

Peripheral blood smears are performed to evaluate the morphology of blood elements, primarily erythrocytes, to determine the presence of blood disorders and hematologic disease or pathology. Stains are widely used in the laboratory to differentiate and identify cellular elements of both blood and tissue. References to stains used in peripheral blood smears and other histologic evaluation should be transcribed as dictated, keeping in mind that a number of them are eponyms and need to follow the rules for eponyms (*See 8.2.7—Eponyms*). Common histology stains are provided below.

EXAMPLE

Hematoxylin (general staining)
eosin (general staining)
Toluidine blue (general staining)
Masson trichrome stain (connective tissue staining)
Mallory trichrome stain (connective tissue staining)
Weigert stain (elastic fiber staining)
silver stain (nerve fiber staining)
Wright stain (blood cell staining)
Orcein stain (elastic fiber staining)

Peripheral blood smears and bone marrow aspirate microscopic evaluations are generally performed using *Wright* stain. The hematologist will often designate how many slides were evaluated.

EXAMPLE

D: Evaluation of bone marrow aspirate was performed using 2 Wright's slides.
T: Evaluation of bone marrow aspirate was performed using 2 Wright slides.

References to *myeloid* and *erythroid* series should be transcribed as dictated, being careful to express ratios accurately.

EXAMPLE

D: Myeloid to erythroid ratio was 1 to 1.
T: Myeloid-to-erythroid ratio was 1:1.
not:
T: Myeloid:erythroid ratio was 1:1.

D: M to E was 1:1.
T: Myeloid-to-erythroid ratio was 1:1.

16.1.8 Flow Cytometry

Flow cytometry is performed on cells in liquid suspension (i.e., blood, bone marrow, body fluids, or tissue cell suspensions) that have been incubated with fluorescently tagged antibodies directed against specific cell surface proteins. A number of different antibody panels are used, depending on the clinical question to be answered. It is ordered in hematology most frequently to identify the antibodies bound to certain cell types that are diagnostically significant for myeloproliferative disorders, such as acute leukemias, lymphomas, and lymphoproliferative disorders.

An *acute leukemia panel* is designed to determine whether leukemic blasts are of myeloid or lymphoid origin, and to further classify the cells as B or T cell, monocytic, megakaryocytic, etc. The panel includes the following antibodies:

EXAMPLE

myeloid	CD13, CD33
B cell	CD10, CD19, and kappa and lambda light chains
T cell	CD2, CD5, CD7
megakaryocyte	CD61
stem cell	CD34
immature lymphoid	TdT

A *lymphoma panel* is performed using 3-color flow cytometry. The panel includes the following antibodies:

EXAMPLE

B cell	CD19, CD20, and kappa and lambda light chains
T cell	CD2, CD5

If a *large granular lymphocyte (LGL)* disorder is suspected, an *LGL panel* is performed, which includes the following antibodies:

EXAMPLE

T cell	CD3, CD4, CD8
NK	CD16, CD56, CD57

There are many other antibodies that can be tested for by flow cytometry, but they are all expressed like those above with capital letters and arabic numerals.

EXAMPLE

Flow cytometry showed a B-cell CLL, positive CD20, positive CD38, and positive ZAP-70. These cells were CD5-positive, CD19-positive, CD23-positive, and CD38-positive, and they had predominant lambda light chains. This is a picture consistent with chronic lymphocytic leukemia.

16.2 Oncology

Oncology is the branch of medicine that is concerned with the identification, treatment, and management of tumors and related cancers. It often involves the diagnostic staging and grading of malignancy, genetic testing, and variable treatments with both chemotherapy and radiotherapy.

16.2.1 Cancer Staging and Grading

Express cancer stages with *stage* and roman numerals. For subdivisions of cancer stages, add capital letters on the line and arabic suffixes, without internal spaces or hyphens.

EXAMPLE

stage 0 (indicates carcinoma in situ)
stage I, stage IA
stage II, stage II3
stage III
stage IV, stage IVB

Express histologic grades using *grade* and arabic numerals.

EXAMPLE

grade 1
grade 2
grade 3
grade 4

TNM staging system for malignant tumors: System for staging malignant tumors, developed by the American Joint Committee on Cancer and the Union Internationale Contre le Cancer.

T	tumor size or involvement
TX	primary tumor cannot be assessed
T0	no evidence of primary tumor
Tis	carcinoma in situ
N	regional lymph node involvement
NX	regional lymph nodes cannot be assessed
N0	no regional lymph node metastasis
M	extent of metastasis
MX	extent of metastasis cannot be determined
M0	no metastasis
M1	distant metastasis

To express degree of positive finding in any of these areas, use arabic numerals. When they are combined to represent a complete staging expression, use arabic numerals *without* spacing between each delineation.

Note: This represents a change in recommendation from that outlined in the 2nd edition of this text.

EXAMPLE

T2N0M0 (stage I equivalent for many types of cancer)

The combinations that define individual stages differ from one cancer type and anatomic location to another. In other words, the TNM expression for stage II disease is different for each type of cancer.

EXAMPLE

stage IIA lung cancer = T1N1M0
stage IIA pancreatic cancer = T3N0M0

Staging indicators are used along with TNM criteria to define cancers and assess stages. These are expressed with capital letters and arabic numerals.

EXAMPLE

grade	GX, G1, G2, G3, G4
host performance	H0, H1, H2, H3, H4
lymphatic invasion	LX, L0, L1, L2
residual tumor	RX, R0, R1, R2
scleral invasion	SX, S0, S1, S2
venous invasion	VX, V0, V1, V2

Prefixes: Lowercase prefixes on the line with TNM and other symbols to indicate criteria used to describe and stage the tumor, e.g., cTNM, aT2.

EXAMPLE

<u>letter</u>	<u>determining criteria</u>
a	autopsy staging
c	clinical classification
p	pathological classification
r	retreatment classification
y, yp	classification during or following treatment with multiple modalities

Suffixes: The T, N, M, and other symbols used for staging may be followed by suffixes in addition to the common X, O, and numerals. These further delineate qualities such as size, invasiveness, and extent of metastasis:

EXAMPLE

Ta	M1a	N1a	pN1a	pNO
Tis	M2a	N2a	pN1mi	pNO(i)
T1b		N2b	pNO(sn)	pNO(i+)
T1c		N2c	pN3c	pNO(mol)
T1a1				pNO(mol+)
T2a				
T2(m)				
T2(5)				
T3a				

16.2.2 Classification Systems

There is a classification system assigned to virtually every type of cancer that qualifies the location and extent of disease. Those provided below represent the most common cancer staging/grading systems, but it is by no means exhaustive. Consult a reputable resource or dictionary to verify appropriate expression of any classification system that may be new or unfamiliar.

Astler-Coller: Staging system for colon cancer from the least involvement at stage A and B1 through the most extensive involvement at stage D.

EXAMPLE

The patient's Astler-Coller B2 lesion extends through the entire thickness of the colon wall, with no involvement of nearby nodes.

Broders index: Classification of aggressiveness of tumor malignancy developed in the 1920s by AC Broders. Reported as grade 1 (most differentiation and best prognosis) through grade 4 (least differentiation and poorest prognosis). Lowercase grade; use arabic numerals.

EXAMPLE

Broders grade 3

Cervical cytology: Three different systems are currently in use for cervical cytology: the Papanicolaou test (Pap smear), the CIN classification system, and the Bethesda System.

The Bethesda System is the standardized nomenclature system for reporting cervical cytology and Papanicolaou test results. Abbreviate only if dictated.

EXAMPLE

atypical squamous cells of undetermined significance (ASCUS)
endocervical/transformation zone (EC/TZ)
atypical squamous cells (ASCs)
loop electrosurgical excision procedure (LEEP)

CIN is an acronym for cervical intraepithelial neoplasia and is expressed with arabic numerals from grade 1 (least severe) to grade 3 (most severe). Place a hyphen between CIN and the numeral.

EXAMPLE

CIN-1, CIN-2, CIN-3
or:
CIN grade 1, CIN grade 2, CIN grade 3

The Papanicolaou test uses roman numerals to classify cervical cytology samples from class I (within normal limits) through class V (carcinoma).

EXAMPLE

Pap I
Pap II

A cervical cytology sample that is within normal limits in the Bethesda system corresponds with a Pap class I or II; Bethesda's atypical squamous cell of undetermined significance (ASCUS) corresponds with Pap class III; Bethesda's low-grade squamous intraepithelial lesion (LGSIL) corresponds with Pap class III and CIN grade 1; and Bethesda's high-grade squamous intraepithelial lesion (HGSIL) corresponds with Pap classes III and IV and CIN grades 2 and 3. In the Bethesda system, the next higher level is labeled simply "carcinoma," corresponding with Pap class V and with "carcinoma" in the CIN system.

Clark level: Describes the invasion level of primary malignant melanoma of the skin from the epidermis. Use roman numerals I (least deep) to IV (deepest). Lowercase *level*.

Clark level I	into underlying papillary dermis
Clark level II	to junction of papillary and reticular dermis
Clark level III	into reticular dermis
Clark level IV	into the subcutaneous fat

Dukes classification: Named for British pathologist Cuthbert E. Dukes (1890-1977). It classifies the extent of operable adenocarcinoma of the colon or rectum. Do not use an apostrophe before or after the s. Follow Dukes with a capital letter.

Dukes A	confined to mucosa
Dukes B	extending into the muscularis mucosae
Dukes C	extending through the bowel wall, with metastasis to lymph nodes

When the Dukes classification is further defined by numbers, use arabic numerals on the same line with the letter, with no space between.

EXAMPLE

Dukes C2

FAB classification: French-American-British morphologic classification system for acute nonlymphoid leukemia. Express with capital M followed by arabic numeral (1 through 6); do not space between the M and the numeral.

M1	myeloblastic, no differentiation
M2	myeloblastic, differentiation
M3	promyelocytic
M4	myelomonocytic
M5	monocytic
M6	erythroleukemia

FAB staging of carcinoma utilizes TNM classification of malignant tumors (See *TNM staging below*).

EXAMPLE

FAB T1N1M0

FAB staging can be further delineated using the *Rai classification* and *Binet staging systems*.

Rai classification is expressed using lowercase *stage* and roman numerals 0 to IV:

stage 0	Patients at low risk, have lymphocytosis, and a high lymphocyte count defined as more than 15,000 lymphocytes per cubic millimeter (> 15,000/mm ³).
stage I	Patients at intermediate risk and have lymphocytosis plus enlarged lymph nodes.
stage II	Patients at intermediate risk but have lymphocytosis plus an enlarged liver or enlarged spleen, with or without lymphadenopathy.
stage III	Patients at high risk, have lymphocytosis plus anemia, and a low red blood cell count (hemoglobin < 11 g/dL), with or without lymphadenopathy, hepatomegaly, or splenomegaly.
stage IV	Patients at high risk but have lymphocytosis plus thrombocytopenia (< 100–103 /dL).

Binet staging further classifies FAB stages and is expressed using lowercase *stage* and capital letters A through C.

EXAMPLE

Binet stage A (fewer than 3 areas of enlarged lymphoid tissue)
Binet stage B (greater than 3 areas of enlarged lymphoid tissue)
Binet stage C (anemia plus thrombocytopenia)

FIGO staging: Federation Internationale de Gynécologie et Obstétrique system for staging gynecologic malignancy, particularly carcinomas of the ovary. Expressed as stage I (least severe) to stage IV (most severe), with subdivisions within each stage (a, b, c). Lowercase *stage*, and use roman numerals. Use lowercase letters to indicate subdivisions within a stage.

EXAMPLE

DIAGNOSIS

Ovarian carcinoma, FIGO stage IIc.

Gleason tumor grade: Also known as *Gleason score*. The system scores or grades the prognosis for adenocarcinoma of the prostate, with a scale of 1 through 5 for each dominant and secondary pattern; these are then totaled for the score. The higher the score, the poorer the prognosis. Lowercase *grade* or *score*, and use arabic numerals.

EXAMPLE

DIAGNOSIS

Adenocarcinoma of prostate, Gleason score 8.

Gleason score 3 + 2 = 5.

Gleason 3 + 3 with a total score of 6.

Jewett classification of bladder carcinoma: Use capitals as follows:

EXAMPLE

- | | |
|---|--|
| O | in situ (Note: this is the letter O, not a zero) |
| A | involving submucosa |
| B | involving muscle |
| C | involving surrounding tissue |
| D | involving distant sites |

DIAGNOSIS

Bladder carcinoma, Jewett class B.

Karnofsky rating scale, Karnofsky status: Scale for rating performance status of patients with malignant neoplasms. Use arabic numerals: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. (Normal is 100, moribund is 10.)

Multiple Endocrine Neoplasm: Express using capitalized letters followed by a space and arabic numerals (1 through 3). Capitalize subclassification letters

following the arabic numeral.

EXAMPLE

MEN 1
MEN 2
MEN 2A
MEN 2B
MEN 3

16.2.3 Chemotherapy Protocols

Commonly encountered in oncology and immunology, multi-drug regimens are often indicated by protocol designations or protocol acronyms. Abbreviations for multiple-drug regimens are acceptable if widely used and readily recognized, particularly within the specialty setting.

EXAMPLE

MOPP (methotrexate, vincristine sulfate, prednisone, and procarbazine)

Some chemotherapy protocols combine abbreviations designating the type of cancer with treatment and drug abbreviations.

EXAMPLE

BRAJCEF (BR = breast cancer, AJ = adjuvant therapy, C = cyclophosphamide, E = epirubicin, F = fluorouracil)

LUAVPG (LU = lung, AV = advanced, P = platinum, G = gemcitabine)

Chemotherapy treatment often necessitates supplemental treatment for anemias and low red/white cell counts that result from excessive cellular destruction secondary to chemotoxicity. Transcriptionists should be familiar with the medications such as those below. Refer to a reputable resource or dictionary to confirm spelling and expression.

EXAMPLE

Procrit
Neulasta
Aranesp
Epogen

16.2.4 Radiation Therapy

Radiotherapy (radiation therapy) refers to the use of ionizing radiation to eradicate cancerous cells. It can be used alone or in conjunction with chemotherapy. When the latter is true, this is typically referred to as *concomitant radiotherapy*.

The amount of radiation used in radiation therapy is measured in *Gray (Gy)* or *centigray (cGy)* and varies depending on the type and stage of cancer being treated. The typical dose for curative cases of solid epithelial tumor ranges from 60 to 80 Gy; for lymphoma tumors, 20 to 40 Gy. Total doses are typically fractionated over a period of days to allow cells time to recover and respond.

EXAMPLE

The patient will be treated with radiotherapy in the adjuvant setting and will receive 2 Gy fractional treatments for a total of 60 Gy.

Radiation therapy is delivered externally through a number of conventional methods:

EXAMPLE

external beam radiotherapy (EBRT or XBRT)
2-dimensional external beam radiotherapy (2DXRT)
3-dimensional conformal radiotherapy (3DCRT)
intensity-modulated radiation therapy (IMRT)

Radiotherapy can also be delivered internally by means of infusion, ingestion, or radioactive seed implantation. This is typically accomplished through treatment with isotopes. *Isotopes* are atoms of the same element that have different atomic masses. They are used in reference to radioactive drugs. When the element name, not the symbol, is used, place the isotope number on the line after the name in the same font and type size; do not superscript or subscript. Space between the element name and the isotope number. Do not hyphenate either the noun or the adjectival form.

EXAMPLE

iodine 128
technetium 99m

When the element symbol is used, place the isotope number as a superscript immediately before the symbol. In environments where superscripting is prohibited, use the following format: element symbol, space (not hyphen),

isotope number (on the line). It is also acceptable to spell out the element name followed by the isotope number.

EXAMPLE

^{128}I or I 128 or iodine 128
 $^{99\text{m}}\text{Tc}$ or Tc 99m or technetium 99m

For trademarked isotopes, follow the style of the manufacturer. In trademarks, the isotope is usually joined to the rest of the name by a hyphen; it may or may not be preceded by the element symbol.

EXAMPLE

Glofil-125
Hippuran I 131