Review, Surgery, and Cardiology

ASSIGNMENT 1: REVIEW OF RESOURCES AND RULES

Before you begin this assignment, read pp. 1–8 (up through and including the "Professionalism" section) in your *Forrest General* textbook.

In this lesson, you'll begin with a review of some medical transcription material from your previous course. Depending on how well you remember the material, it may require only a brief skimming of the pages or a more intense study session.

A Broad Range of References

No matter what kind of job circumstances you find yourself in as a transcriptionist, you'll want to have reference material to use at a moment's notice. You'll need a general reference and specialty references so you're ready for any situation. Make sure you're familiar with your reference books, so you can easily find a spelling, a usage, or an abbreviation within a few seconds.

Be sure to keep your references updated. Pages 255–257 in your *Forrest General* book have some information on general and specialty references and of course, the *Forrest General* book itself is a good reference to keep at your fingertips.

There are thousands of medical references available for every level and every budget—even an inexpensive *Gray's Anatomy Coloring Book,* which happens to offer an especially good review of skeletal structures. You may want to review the AHDI book of style, as this guide is used in medical transcriptions. You can review the AHDI Web site at **http://www.ahdionline.org/.** You don't have to own all the reference books you'll use; but you need to have access to them.

Finding Good Reference Materials

The Internet is a convenient shopping tool in your search reference materials. When searching for a reference book, it's good to be able to view the text of a book and the table of contents online. Don't purchase reference books without looking inside. If you do find a reference book you like, check out Internet resources and mail order catalogues for competitive prices.

You might need to get resourceful in your search for good reference materials. There are a number of places in your area that can be great reference sources.

- Local community colleges and university book stores stock medical transcription references. This may be especially true if the schools have nursing or medical technology programs.

- Local medical schools usually have a bookstore and a medical library; check their used book sales and see if you can obtain access to the library.

- Large hospitals and medical facilities usually have central and departmental libraries. You may be able to gain access to these facilities.

- Local physicians and nursing organizations may sell reference books at conferences, through journals, or through member contacts.

- Consumer bookstores or big-box stores occasionally sell medical dictionaries and drug indices.

The most important thing to keep in mind when shopping for reference books is to look for books that are reader-friendly, current, and accessible.

Internet References

Check the Web sites you were using in Medical Transcription 1 to make sure you can still access them, then add at least one new reference site for

- General grammar rules

- Spelling and punctuation assistance

- General medical terminology

- Medical specialties

- Medical transcription information

Here are some current MT sites:

MT Desk is a one-stop medical transcription shop. At **http://www.mtdesk.com,** click on **Medical Terminology** to take advantage of weekly medical vocabulary updates offered on the site.

The Health Professions Institute Web site offers downloads on medical topics and weekly quizzes and study tips. Visit the Web site at **http://www.hpisum.com.**

Print References

You'll want to have a variety of printed MT references available for your use. These references include medical dictionaries, medical word books, specialty word books, a drug index, transcription style guides, and grammar references.

Medical dictionaries. Dictionaries should be easy for you to use, as words and terms are listed in alphabetical order. In addition to definitions, many medical dictionaries include usage tips and related words. Traditional dictionaries include *Mosby's Medical Dictionary, Taber's Cyclopedia Medical Dictionary,* and *Dorland's Medical Dictionary.*

Medical word books. Medical word books go beyond what dictionaries offer, and include associated information such as related drugs, diagrams of body systems, and medical abbreviations. Medical wordbooks may list words in alphabetical order or according to a medical specialty, such as cardiology or obstetrics. You decide which works best for you. *Webster's Medical Speller* and *The Medical Word Book* are examples.

Specialty word books. If you'll be working within a particular medical specialty, you'll want to have a reference book that goes into great detail about that specialty. If you're working with general surgeons, medical dictionaries or word

books will probably give you all the information you need. If you're working with pediatric neurosurgeons, you'll want to find a specialty word book that covers that subspecialty.

Drug index. In a world where there are so many over-the-counter (OTC) and prescription medications available and where every medication can have three or four names (the *trade* name, such as Motrin; the *generic*, or actual compound name, such as ibuprofen; and the *usage category,* such as nonsteroidal anti-inflammatory drugs), you'll need a reliable resource in which to search for correct spellings, product categories, a manufacturer's name, or dispensing information. The most commonly used drug index is the *Physician's Desk Reference (PDR).* The *PDR* is published annually, with brief updates published throughout the year. Another popular drug index is *The Pill Book.*

Note: "Indices" is the plural for "index." "Indices" shouldn't be confused with the word "indicated," as the two words aren't related.

Transcription style guides. There are many transcription styles currently in use. The facility or medical group with which you work may have an in-house transcription guide or use standard AAMT formats, which makes your job easier. Once you become experienced, you'll be able to pick up styles from sample reports. In the meantime, or if you're asked to suggest transcription styles, you'll want to have a reference. Your text is a good reference; others include the AHDI *Book of Style for Medical Transcription* and the *Medical Transcriptionist Handbook.*

Grammar references. You're not going to just be typing words; you'll also be typing sentences, paragraphs, letters, and complete reports. You'll want to have a grammar reference available when you have questions on sentence structure, spelling rules, and how to order a table of contents or format a footnote. Examples of grammar references include *The Merriam Webster Concise Handbook for Writers* and *The Writer's Handbook* or the AHDI *Book of Style.*

Transcribers. A traditional transcriber looks like an elaborate tape recorder, with a control base holding a cassette; volume and speed controls; and stop, rewind, and fast forward functions, as well. Most transcribers have foot controls, so the MT has hands free for the keyboard. Many transcribers can be hooked to headphones, so the MT can minimize distraction. MTs need to have good hand, foot, eye, and ear coordination!

Mini- and microcassettes. Minicassettes have been popular for several years and many health care professionals have become attached to them, although they're considered somewhat outdated. Replacement cassettes need to be ordered from specialty companies.

Microcassettes are the smallest cassettes available and have become popular because they're sold in grocery stores, music shops, big-box stores, and variety stores. Microcassettes are also popular because the transcriber can easily fit into a pocket or a brief case.

Standard, mini- and microcassette transcribers remain popular because many people view the cassette as physical security for reports, even though tapes are rewound and taped over or can be erased or broken.

Digital transcription equipment. A newer transcribing technology is *digital voice processing,* which is computer-based. The person dictating speaks into a telephone or other computer hookup. The voice is digitized, or converted into computer code, and saved on the hard drive of a computer. The MT listens to the voice via the computer. The MT has to have a transcription port to "translate" the dictation.

Advantages of this technology are that dictations can be assigned to various transcriptionists (since computer dictation can be broken up into parts as opposed to a tape, which can't be divided). Also, there are no tapes to break or store. Disadvantages are that each transcriptionist must have access to a port and there may be other problems associated with computer usage.

Other computer-based transcribing systems include voice synthesizers or remote dictation, both of which require computer and phone systems and are gaining wide acceptance.

Transcription Tips and Rules

As you know, medical transcription requires complete accuracy. After all, people's lives depend on your work. MTs need to learn many things, including

- The balance between transcribing exactly what's said and the correct wording

- Acceptable formatting

- Spotting discrepancies and the procedures to clarify and correct the dictation

Let's continue with our review of important material before moving on to some hands-on practice.

Reviewing *Forrest General* Information

Medical report formats. You should be familiar with history and physical, consultation, operative, discharge summaries, radiology and pathology report formats. For a good review, read pages 10–32 in your *Forrest General* book.

Common medications. Make sure you've got resources at hand for looking up common medications. Your *Forrest General* book offers some information on pages 240–242, but a drug handbook will provide a more detailed list of medications.

Common instruments, dressing and sutures, and laboratory reports. Refer to *Forrest General* pages 242–252 as well as reviewing materials from Medical Transcription 1.

Medical prefixes, suffixes, and combining forms. Your Medical Transcription 1 materials would be a good review for this, as would *Forrest General* pages 253–255. You can also use your body systems terminology study units as a reference to anatomical sites.

Transcription Rules

Be certain that you're familiar with transcription rules pertaining to

- When to use capitalization or quotation marks

- When to use numerals and when to type out number words *(two, 2,* or *II)*

- When to use colons or semicolons

- When to begin a new sentence

- How to create a new phrase with the use of the appropriate punctuation

Capitalization

General Capitalization Rules

Here's a review of some general capitalization rules:

- Capitalize the first letter of the first word of every new sentence.

- Capitalize the first letter of proper nouns and adjectives, such as Jonas Salk, American.

- Capitalize the first letter of the first word of the first portion of a direct quote, when it's split: "There were many patients waiting to be seen," the nurse said, "so the office staff worked overtime."

- Capitalize the first letter of the first word (as well as names or words that stand for names) that open and close formal correspondence, such as "To Whom It May Concern," and "Yours truly."

- Capitalize the first letter of formal race, nationality, and language names: "The patient is an Asian male, originally from Singapore, and he speaks Japanese."

- Capitalize brand names and trade names.

Medical Transcription Capitalization

Here are some rules for medical transcription capitalization:

- Capitalize only the first letters of words following colons when listing body systems in physical examinations as in "Eyes: Clear. Pupils: Equal, round, and reactive."

- Capitalize the first letters of formal names of diseases, procedures, or body parts as in Crohn's disease and *Hemophilus influenzae.*

- Capitalize the first letter of the first word of a species name of bacteria as in *Escherichia coli, Saccharomyces capillititii,* and *Staph aureus.*

Capitalizing Headings

For basic medical report headings, use guidelines outlined in your text, in medical references, or by your facility.

The typical report headings for an H&P are

- Chief complaint

- History of present illness

- Past history

- Review of systems

The typical report headings for a consultation report are

- Date of consultation

- Reason for consultation

- Assessment

- Recommendations

When Not to Capitalize

MTs *usually don't* capitalize when

- Relationships are mentioned, as in "patient's mother said he slept for four hours"

- Names of departments are used, as in pediatric unit or the radiology department (for example, recovery room would be all lowercase)

- Greek letters are used

- Time suffixes, such as a.m. and p.m., are used

- Units of measures are mentioned, as in 15 mg of fluid or twelve feet of space

Remember: The key word is *usually.* At times, this doesn't apply. For example, if the physician dictates "surgical ICU," *surgical* shouldn't be capitalized, but *ICU* should be. If the physician dictates "surgical intensive care unit," this shouldn't be capitalized. It's capitalized in the practice report for chapter 2, transcription 3, but the rule of capitalization is the department name shouldn't be capitalized.

Look through your local newspaper and see how capitalization is used in letters to the editors, in article headings and sub-headings, and in advertising copy. Notice how capitalization can emphasize meaning.

Plurals

Remember the following when you're transcribing dictation:

- Dictated plurals and possessives are often confusing.

- A singular word form can be dictated when a plural word form is correct.

- The plural word form may be mispronounced.

- The dictated punctuation may make a word possessive instead of plural.

Let's review how to create plural words in English.

- For most English words, you simply add an *s*

- For most words ending in *z, s, x, ch, or sh,* add *es*

- For words ending in *y,* you usually change the *y* to *i* and add *es*

- For Latin words ending in *a,* add an *e* as in larva (singular)/larvae or stria/striae

- For Latin words ending in *is,* drop the *is* and add *es* or *ides* as in naris/nares or prothesis/protheses

- For words ending in *us,* drop the *us* and add an *i* as in fungus/fungi or alumnus/alumni

- For words ending in *on,* drop the *on* and add *a* as in ganglion/ganglia or phenomenon/phenomena

■ For words ending in *oma,* drop the *oma* and add *ata* as in adenoma/adenomata or fibroma/fibromata

■ For word ending in *um,* drop the *um* and add *a* as in bacterium/bacteria

Possessives

Many people are confused about the difference between possessives and plurals, at least when it comes to including or positioning an apostrophe. But there's a big difference in meaning between "belonging to her" and "more than one." Forming possessive words correctly takes a little extra thought—it's not always just a matter of adding an apostrophe and an *s.* Here are guidelines for writing possessives.

■ For words that don't end in *s,* form a possessive by adding an apostrophe and an *s* as in the *child's* pain or the *patient's* report.

■ For words that end in *s,* form a possessive by adding an apostrophe and an *s,* as in the *umbilicus's* end.

■ If a word ends in an *s* sound, usually ending with a *z* or an *s,* you may be able to add only an apostrophe, as in the *Hernandez'* infant.

■ If a word is a plural ending in *s,* you only need to add an apostrophe to show possession, as in the *doctors'* conference or the *arms'* color.

■ Remember that some words ending in *s,* such as *hers, yours, ours,* and *its,* are possessive as they are and need no apostrophe. If you're not sure if such a word needs an apostrophe, think of *his,* which is similar, and *it's,* which is not—it's a contraction of *it is.*

■ When transcribing a year, don't abbreviate the year using an apostrophe; the full year should appear in the transcription report (for example, 1995, not '95).

Numbers

There are many, many numbers and number combinations dictated for transcription, such as

- Patients' weights
- Amounts of medication
- Numbers of instruments
- Wound sizes
- Blood pressure readings
- Reflex measurements

Repetitions and many more items are all expressed with numbers. Some medical transcription requires written number expressions, meaning that numbers are written out, such as *one hundred times.* Other medical transcription can employ digits, such as *100 times.*

Although you'll most often use Arabic numerals, Arabic and Roman numerals are sometimes necessary. Refer to the following chart for the most commonly used Arabic and Roman numerals.

Arabic and Roman Numerals							
1	I	11	XI	30	XXX	400	CD
2	II	12	XII	40	XL	500	D
3	III	13	XIII	50	L	600	DC
4	IV	14	XIV	60	LX	700	DCC
5	V	15	XV	70	LXX	800	DCCC
6	VI	16	XVI	80	LXXX	900	CM
7	VII	17	XVII	90	XC	1000	M
8	VIII	18	XVIII	100	C		
9	IX	19	XIX	200	CC		
10	X	20	XX	300	CCC		

Rules for Written Expression of Numbers

Here are some rules for the written expression of numbers:

- Write out numbers one through nine (one, two, three, etc.).

- Write out numbers that begin sentences, as in "Ten patients began this study."

- Write out fractions that are less than one.

- Write out single-digit ordinal numbers (numbers that end with -th, -rd and -st) as in the *third* cranial nerve was affected.

Choose whether you're going to write out numbers or use digits and stay consistent, as in

One, two, or six patients will be seen. (Correct)

One, 2, or six patients will be seen. (Incorrect)

Rules for Using Numerals

Refer to the following rules for using numerals in medical transcription:

- Use digits for numbers greater than 9, such as the RBC was *90,000.*

- Use digits with age, such as the *24-year-old* man.

- Use zeros to show placement of digits in a decimal, such as *0.24* mg (not .24 mg).

- Use fractions with age, such as the toddler is *2½* years old.

- Use decimals with measure, such as the incision is *2.75* mm wide.

- Use digits for blood pressure and temperature values, such as *120/80, 98.4* degrees F.

- Use digits for drug values or amounts: Motrin *800* mg

- Use digits for suture sizes: *#2* nylon, *3-0* chromic

- Use digits for rating scales: Vision was *20/40*

- Use digits for grades: A grade *2/6* murmur was present

- Use digits for testing scores: The infant had an Apgar score of *6* at two minutes

- Use digits for specific time notation: *9:00 a.m.*

Using Numerals and Words

As you remember from Medical Transcription 1, there are some times when you must use a combination of words and digits in the same sentence. For instance, scores should be in digit form, but numbers below 10 are normally typed out.

> The infant's Apgar scores were 4 and 6 at two and three minutes.

Two numbers next to each other could cause confusion, or simply be difficult to read. In this case, the measurement retains the numeral notation, but the other number is written out, even if it's over nine.

> There were twelve 12 mm lacerations on his right hand.

You can see that typing *12 12 mm lacerations* would be confusing!

Comma Rules

As you've learned, there are four basic rules for commas. If your sentence has one of these, use a comma. If your sentence doesn't have one of these, don't use one.

A compound sentence gets a comma before the conjunction. For example,

> John went to the store, and Mary went to the movies.

Each part of this sentence can stand alone as a complete sentence. Since the parts are joined with a conjunction, a comma is used before the conjunction.

Items in a series are set apart by commas. This includes the final item before the conjunction. For example,

> There are blue, yellow, green, and red balloons in the bunch.

While the final comma is optional in regular English usage, the *Forrest General* style is to always use it.

Introductory phrases and clauses of more than four words are set apart with a comma. For example,

> While we waited for the bus, it started to rain.

Introductory phrases or clauses of four or fewer words are *not* set apart with a comma.

> At this point they went to the mall.

Nonessential information is set apart with commas. For example,

> The patient, well known to me, was admitted to the ER.

The fact that the patient is well known to the doctor is nice to know, but not essential to understanding the sentence or treating the patient. The phrase could be removed from the sentence without altering the essence of the sentence. In another example,

> The x-rays demonstrated a fracture, nondisplaced, of the right arm.

The essential part of the sentence is that there's a fracture of the right arm. The fact that it's nondisplaced, which means it's the easiest fracture to treat and needs no manipulation, isn't essential to what the x-rays show, so it's set off with commas.

Now look at the next example.

> Air that is polluted is bad for you.

People often try to write this sentence as

> Air, that is polluted, is bad for you.

Grammatically, the sentence above means that the words inside the commas could be removed leaving the rest of the sentence intact. Doing so would leave the sentence reading

> Air is bad for you.

This is clearly incorrect. Remember, if the information in question is necessary to understanding the sentence or treating the patient, don't use commas.

Formatting Rules

Don't use mixed construction. If a number in the sentence has to be written as a numeral because of a particular rule, then all numbers in that sentence should be written as numerals. For example,

The patient was to take 4 pills a day for 21 days.

The number 21 has to be written as a numeral because it's more than ten. The number 4 would usually be written as a word, but since the numeral 21 is a part of the sentence, the number 4 should also be a numeral. This rule includes numbers that are part of a device name, such as a 3-2 drill bit.

Follow the model reports starting on page 12 of your *Forrest General* textbook. You'll note that Forrest General Medical Center doesn't use a signature line. The signature line should be four spaces from the last sentence. For example,

This is the last sentence.

John Doe, MD

Your margins must measure one inch on the paper reports you produce. However, just because your computer program is set at one inch, doesn't mean your printer output will produce one-inch margins. You must measure the actual margins on the printed paper reports and adjust the computer settings as needed so that one-inch margins are produced on your documents.

For numbered lists, use the style shown below. The items should be lined up at the left margin. Note that there's no colon following the heading when using this style.

Treatment Recommendations

1. Admit the patient to an inpatient substance abuse facility at the earliest possible date for detoxification and rehabilitation programs.
2. Initiate family counseling with all members of the patient's immediate family regarding substance abuse, codependency, and suicide prevention through Tri-County Family Practice Center.
3. Investigate possible placement of the patient in a long-term care facility for behavior modification on release from the detox/rehab inpatient facility.

A Report of Tissue Examination is also a Pathology Report. You'll submit a Report of a Tissue Examination for your first exam. Follow the report on textbook page 229 to format the headings. The heading Specimen Number, Date Removed, and Date Reported shouldn't be justified right:

Specimen Number:
Date Removed:
Date Received:

Date Reported:

On page 2, remember to add the physician name, physician initials, your initials, and dictated and transcribed dates.

Medical reports are legal documents. In addition to creating complete correct documents, transcriptionists should create documents that are difficult to alter. Don't move an entire paragraph to the last page. As necessary, move only the final two lines, even if the page break ends up being mid-sentence. Breaking the sentence makes it very difficult to add information between the pages, since the addition would have to match up at the end of the first page and again at the beginning of the last page. Remember the initials and dates.

Clinic reports are internal documents, and as such are less formal than hospital reports. Therefore, any abbreviation you're given in the glossary for a clinic report can be used in that report, even if the doctor dictates the entire word.

You may use one or two spaces after periods for all your work. Just be consistent.

If the dictator says "intravenous," spell it out. If the dictator says "IV," type IV—all caps with no periods. If the doctor says, "head, eyes, ears, nose, and throat," the abbreviation HEENT is acceptable. PERRLA (Pupils are equal and round, reactive to light and accommodation.) and EOMI (Extraocular muscles are intact.) are each complete sentences; each should have a period at the end. (You might have seen it in other formats, but you should use a period for your work in this program.)

Competent Medical Transcriptionists

Medical transcription is all about words! That doesn't mean that all dictators value their words. Dictators don't usually listen to themselves speak, but they do expect you to listen up and transcribe exactly what they said. This isn't an act of magic. Experienced MTs take oral language and transform it into accurate written reports. A competent MT can do the following:

- Recognize that *there* and *their* sound alike but have different meanings.

- Remember that *nasal* is an adjective that stands alone and is never used as a suffix, as in "nasal passages;" *"naso"* is a suffix, which can never stand alone as a word.

- Recall synonyms, antonyms, acronyms, and homonyms used in MT.

- Master true and phonetic spellings of medical terms.

Once you've got these areas mastered you can transcribe and edit with precision and accuracy.

Acronyms

You previously learned about acronyms such as the ones below and their wide usage in everyday language.

asap (as soon as possible)

fyi (for your information)

sase (self-addressed stamped envelope)

You can certainly think of more acronyms in popular use. Some acronyms have become so common that they are thought of as words. For example,

laser (light amplification by stimulated emission of radiation)

CD-ROM (compact disk with read-only memory)

There are many, many medical acronyms, some for general medicine and some for specialties.

Synonyms, Homonyms, and Antonyms

Let's take a moment to review synonyms, homonyms, and antonyms. *Synonyms* are words that have the same meaning but don't sound similar. For example, synonyms for "difficult" could be "hard," "strenuous" or "complex." For "disease," you could use "illness," "sickness" or "ailment." Remember that a dictator may ask you to use a different word for something she's repeating too many times, just so the report doesn't sound redundant. Also, remember to use the thesaurus feature of your word processing program if you're not sure of a correct synonym.

Homonyms may be tricky for you to decipher. They really require you to pay attention to context. Homonyms are pronounced the same, but spelled differently and have different meanings. For example, "know" and "no" sound exactly alike when spoken but have vastly different meanings.

Homonyms give us such a hard time because they often defy phonetics and other word rules.

Antonyms are words that have opposite meanings. In your transcription practice, you've probably learned to be on the lookout for antonyms that sound very much alike.

Words Commonly Confused in Medical Dictations

For example, *hypo* is a prefix meaning too little and *hyper* is a prefix meaning too much. Hypotension and hypertension are very, very different conditions but can sound very similar when dictated. They even sound very similar in everyday conversation!

In cases such as hyper- and hypotension, you'll have to pay close attention to the context in which the words are used. There may even be some times when you'll have to ask the dictator to clarify because you won't be able to decide from context which term he meant to use.

On occasion, a dictator may accidentally use one word when he meant to use the antonym. For example, your dictation sounds like this:

> "On examination, the patient's blood pressure was found to be very high. The patient stated that he had a history of *hypotension* and took medication to lower his blood pressure."

An alert MT will pick up that an antonym had been inadvertently used in the dictation. The word that would best fit in this context is *hypertension.* Here are some more examples of antonyms that are commonly confused in medical dictation:

- Macroscopic/microscopic

- Hypoglycemic/hyperglycemic

- Adduct/abduct

With continued practice, you'll be attuned to watching out for these types of words and be careful to use them correctly.

Formatting History and Physical Reports

You should be familiar with the formatting of the following report types:

History and physical. The history and physical is generally dictated by an admitting physician or resident, or sometimes by a nurse practitioner, depending on the facility. The "history" portion contains information that the patient or family, or in some cases employers, caregivers, or paramedics, gives the health care professional about the patient's complaint or symptoms, relevant information about family, medical or social history, and the admitting person's impressions about the patient's physical and mental condition. The "physical"

portion contains current findings of the patient's condition, such as vital signs, obvious physical injuries, degree of agitation, and so on.

Operative report. This report is dictated by the operating physician, assisting physician or assisting resident. It's a precise record of the operative procedure, with timing noted, instruments and procedures used, and sponge and instrument counts. The following are usually included, as well: anesthesiologist and anesthesia used, pre- and postoperative diagnoses and findings.

Consultation. when a team approach is used, consultation reports are dictated. For example, a cardiologist may team with a cardiac surgeon to care for one patient. The cardiologist is the attending doctor and the cardiac surgeon is the consultant. The consultant will dictate a report addressed to the attending physician, including the reason for the consult, testing results, impressions and recommendations.

Discharge summary. When a patient is released from a health care facility, a discharge summary is dictated. The discharge summary is an overview of why the patient was admitted, what was done, what the results were, condition and prognosis and recommended follow-up care.

X-ray and radiology reports. After x-rays, CT scans, MRIs, nuclear medicine procedures, and fluoroscopy are completed, a radiologist "reads" the films and dictates a report explaining what's seen (impressions) and what they mean (conclusions).

Pathology and autopsy reports. Samples of tissue, body fluids or bone are taking during biopsies, lab tests, surgeries, and autopsies. Reports are dictated on the findings from these samples.

Psychological assessments. Rather than physical findings, these reports focus on the mental status and functioning of patients. Lab tests, history of prescribed medicines, and recommendations may be included.

Formal chart notes. On occasion, health care professionals dictate chart notes. They may be in narrative style or dictated as SOAP notes.

Medical Chart Notes

You learned previously about SOAP notes. SOAP stands for Subjective Data, Objective Data, Assessment of S&O, and Plan.

You'll recall a few other types of charting, including HPIP (History, Physical Examination, Impression, and Plan), PIE (Plan, Indication, and Evaluation), and HEAP (History, Examination, Assessment, and Plan). All these methods of charting medical notes all help the health care professional present information in an organized fashion.

No matter what style the note takes, the objectives of a chart note are the same: Find out why the patient is complaining (subjective), examine the patient, and perform tests to find any abnormalities (objective), give your professional opinion about the problem, and comprise a plan for treating the problem.

Transcription Rules from the AHDI

Use block format for all reports, with justification at the left.

Don't indent for new paragraphs, new topics, and so on.

AHDI recommends $^1/_2$- to 1-inch spaces at the top and bottom of the page and at the left and right sides. Review sample reports from your facility or inquire which spacing is preferred. Use one-inch margins for the transcriptions you submit to the school.

Hyphens are used only when the word has an existing hyphen, such as Bender-Gestalt test. Don't use a hyphen to separate syllables of words at the end of a typed line. Arrange spacing so the entire word is contained on one line.

If the dictator indicates no paragraphs, then the MT must format paragraphs where appropriate.

Type all major headings in capitals.

Don't type the word "same" for a repeat phrase, even if it's dictated as "same." For example, a radiologist may dictate "broken left femur," under IMPRESSIONS and say "same" for CONCLUSIONS. The MT should retype "broken left femur" under CONCLUSIONS.

For numbered lists, number them as is indicated by the dictator. If the numbering is inconsistent (for example, "1, 2, . . . C or "1, 2 . . . 4") or if some items are numbered and some are not, it's the MT's responsibility to correctly and consistently number in the transcribed report.

Don't abbreviate headings, even if they're dictated that way, unless the abbreviations are widely recognizable, such as CT scan or OB/GYN.

When a report is more than one page, type "continued" at the bottom of each page and place a heading at the top of each succeeding page.

The signature block should begin at the left margin four spaces after the last line of type. Type the dictator's full name followed by the appropriate initials, such as MD, OD, or DDS. The dictator's title should be typed on the left margin one single space below the name, as in

Bert M. Teiz, MD
Opthalmologist

Workloads and Priorities

Not only will you need to properly transcribe reports, you may need to prioritize the order in which to transcribe them.

You also need to estimate how long it takes to transcribe various reports, as well as your fees for doing so.

As always, accuracy and confidentiality are essential.

Here are several points to consider concerning transcription workloads:

- Stat reports need to be done ASAP. (Remember that acronym?) You'll need to establish what the "ASAP" time frame is for your facility.

- Current reports, such as history and physicals or consultations, may not be needed for 24 hours, as treatment may proceed without these documents.

- Discharge summaries and emergency notes usually aren't needed to treat a patient, so you may have up to 72 hours to complete these, but always check with a supervisor.

- Speed and accuracy are important for all medical transcriptionists.

- Ethically, patients' medical information must be absolutely accurate to ensure proper treatment.

- Medical records that need to be transcribed have to be available ASAP so medical treatment can move forward.

- Medical transcriptionists' reputations are largely made by their ability to produce accurate, properly formatted reports delivered in a timely manner.

- Medical transcriptionists, especially those in private practice, are generally paid by the report. The more reports generated, the higher the income.

- MT freelancing is a highly competitive industry.

- We can't accurately quote you rates that MTs receive; this depends on the area in which you work, the amount of competition, and your reputation for accuracy and efficiency.

- Remember that the rates you charge must take into account all your costs (time for transcription and editing, maintaining transcription equipment, costs of faxes, phone calls and online services, taxes, office rent and supplies, etc.).

Calculating Productivity

How do you calculate your productivity? Use the Word Count feature in your word processing software (Word or WordPerfect). Clock the time (in minutes) it takes you to transcribe a report. Divide the number of words or lines by the minutes it took you to transcribe the report. This is your *productivity rate.*

Formal reports are generally calculated by the line, while formal chart notes, correspondence, and formal papers are generally calculated by the word.

Depending on your employment situation, you'll set your fee or the fee will be set by your employer. Fees are usually set by the report or "piece." Multiply your productivity rate by your fee to see how much you're earning. This is usually an hourly rate.

For example, let's say that it takes you 10 minutes to transcribe an ultrasound report. The report contains 20 lines. Divide 20 by 10, which equals 2. Therefore, you transcribed two lines per minute. This means you currently can transcribe six ultrasound reports per hour. If you receive $3 per ultrasound report, you would earn $18 per hour.

ASSIGNMENT 2: FORMATTING REPORTS

Before you begin this assignment, read pp. 10–32 in your *Forrest General* textbook.

General Transcription Guidelines

Every facility will have its own guidelines for report formats. Here are some general guidelines:

- Always check with the dictator or facility about acceptable report formats. Formats can vary a great deal from facility to facility.

- Find out if your facility will allow the entering of section headings, even if they aren't dictated. This may make life a little easier for the dictator. Section headings help the clarity of transcribed reports, making them easier to read through, and not having to dictate section heads for each report will save the dictator time and wear and tear on the vocal chords. Remember, a physician could spend three or four hours a day dictating; that's a lot of talking!

- Never second-guess what a dictator means. For example, if an entire section isn't dictated, don't type in the section heading and leave it blank. Don't transcribe an omitted section.

- Don't type in "normal" if no comment is made about a body part, reflex, etc.

- Transcribe only required patient information.

- Single-space reports with double spaces between paragraphs.

Tips for Transcribing Dictation

- MTs are responsible for being aware of local, state, and federal laws regarding patient confidentiality. (We'll discuss patient confidentiality in more detail later in the course.)

- Dictators may dictate information that could compromise patient confidentiality. Don't transcribe this information. If you have questions, check with a supervisor.

- Some facilities may require certain information, such as a patient's room number, on all reports. If this information isn't dictated, leave a note for the dictator, or appropriate person, to supply it. The MT will then edit the transcription to contain this information.

- *Always* include who dictated and who transcribed the report in the appropriate area of a report (this area will vary from facility to facility). There may sometimes need to be two signature lines. For example, there may be an attending physician and a dictating physician handling one report.

- Again, keep in mind, every facility has its own formats for reports. You'll adapt to whatever format is required. The key is to follow the accepted format and be consistent.

General Hospital Reports

MTs must be familiar with six general hospital reports. The *history and physical* and *discharge summary* are the two most basic hospital reports. The *operative notes* and the *consultation report* are often dictated during a patient's hospital stay. Add the *radiology report* and the *pathology report* and you have the six basic hospital reports.

History and Physical

The main sections of the history and physical are

■ The History of Present Illness, which consists of information obtained from the patient or patient's family or guardians, the patient's past medical history and any other additional pertinent information

■ The Review of Systems, which is a thorough checking of each body system, such as the respiratory system, the head, the limbs, etc.

The Discharge Summary

By this time, you should feel very comfortable with medical report formats. Now's the time to test your comfort level!

Type or hand-sketch a discharge summary template without referring to any materials. You should be able to remember all the headings, in the proper format, in reference to capitalization, spacing, etc.

You should be able to set up a typed page with a correctly formatted discharge summary at this point; it shouldn't take you more than five minutes to format this template. Keep on practicing!

Does your template have the same headings and layout as the discharge summary on page 16 of your *Forrest General* book?

The Consultation Report

Type or hand-sketch a consultation report template without referring to any materials. You should be able to remember all the heading, in the proper format. You should also be able to set up a typed page with a correctly formatted template. Pay close attention to headings, punctuation, and spacing; these make for appropriately formatted reports.

Does your template have the same headings and layout as the consultation report on page 15 of the *Forrest General* book?

The Operative Report

Type or hand-sketch an operative report template without referring to any materials. You should be able to

- Remember the headings, in the proper format
- Set up a typed page with a correctly formatted template

Do you think different types of operations may have fewer headings or some additional headings? In fact, some facilities used "fixed" templates and place an "n/a" under headings not necessary to particular reports. Other facilities will have you omit headings not utilized in particular reports.

Does your template have the same headings and layout as the operative report on page 14?

The Radiology Report

Again, without referring to any materials, type or hand-sketch templates for a simple x-ray report and a specialized report for a colonoscopy.

By now, you should be able to remember all the headings, in the proper format, including correct capitalization, spacing, etc.

Do your templates have the same headings and layout as the x-ray report on page 20 and the colonoscopy report on page 26 of your *Forrest General* book?

Now try to think of several other types of radiology reports. Here are a few:

- Ultrasounds

- Echocardiograms

- Leg vein and leg artery conduction exams

- Mammograms

- MRIs

The Pathology Report

Type or hand-sketch a pathology report template without referring to any materials. You should be able to remember all the headings, in the proper format. You should be able to set up a typed page with a correctly formatted template. Be sure your headings, punctuation, and spacing are correct; without them your reports won't be correctly formatted.

The Psychological Assessment

In addition to the general hospital reports, you may be called on to do a report for a psychological assessment.

Type or hand-sketch a psychological assessment template without referring to your materials. Try to remember all the headings, in the proper format, in reference to capitalization, spacing, etc. Pay close attention to your headings, punctuation and spacing, which make for appropriately formatted reports.

Check the psychological assessment on pages 28–32. Does your template have the same headings and layout?

Study this and all previous templates until you can quickly reiterate headings and/or spot any needed corrections.

ASSIGNMENT 3: SURGERY

Before you begin this assignment, read pp. 33–45 in your *Forrest General* textbook.

Introduction to Surgery

The ancient Greek word for surgery has been translated as "treatment of illness or deformity by manipulative measures." Doctors treated illness by opening up a portion of the body to find out what was going wrong.

Today, surgeons use procedures that range from routine to radical. Whether removing an appendix, setting a compound fracture, or replacing a heart valve, surgeons work to improve the quality of life for their patients. Some surgeons are general surgeons and others specialize in a particular area.

Transcriptionists may produce many referral notes and reports for surgeons. A surgeon usually isn't the first doctor a patient sees. Surgeons generally work with a network of other specialists who refer patients when surgery is needed.

For example, if a family physician determines that a patient requires surgical removal of the gall bladder, a referral to a surgeon is made. The family physician is responsible for general and continuing care of the patient. The surgeon is responsible for the surgical procedure and pre- and post-operative observation.

Remember, surgery doesn't always require dramatic cutting. There are many laproscopic procedures that require very small incisions but allow for major surgery, such as appendectomy or cholescystectomy. Some surgeries, such as cardiac stenting, by their nature require a great deal of expertise and very small incisions.

Plastic Surgery

Plastic surgery also has its naming roots in Greek. *Plassein* is the Greek verb "to mold." Plastic surgeons train in the replacement, alteration, or restoration of various parts of the body.

Corrective plastic surgeons might repair a cleft palate or perform skin grafts. *Elective plastic surgeons* (also known as *cosmetic surgeons* or *esthetic surgeons*) might perform a *rhinoplasty* (commonly referred to as a "nose job") for a more esthetic appearance or *dermabrasion* to remove the signs of skin damage.

Do you know the meaning of all the italicized terms in this chapter? If not, take some time and look them up. Here are some everyday surgical terms with which you need to be familiar:

- Laparotomy
- Resection
- Gastrectomy
- Hernioplasty
- Otoplasty
- Paracentesis
- Suction lipectomy

General Surgery Abbreviations and Terminology

There are many, many abbreviations used every day in medical terminology. As a medical coder, you'll need to identify them quickly and accurately. You'll need to know the correct spelling of the related term so that you can spell it out when necessary. Turn to the abbreviations provided in the chapter on general surgery. Cover the medical terms with a sheet of paper and see how many abbreviations/acronyms you can identify correctly. Write out the medical term for each abbreviation. Spelling counts!

For the ones you didn't recognize or remember, take time to make flash cards to use whenever you have a few moments to study them. It's essential to be able to recognize and "translate" these abbreviations quickly and accurately.

As you move through your material, take time to become familiar with the terminology for general surgery by studying the terms provided in the chapter on general surgery as well as listening to the general surgery terms in the audio glossary.

Transcribing for General Surgery

Every medical specialty has its confusing terms, especially those that sound very similar. Do you know the difference between the following surgical terms?

- *Serous* versus *serious*

- *Homeostasis* versus *hemostasis*

- *Hemothorax* versus *hemithorax*

- *Epithelial* versus *endothelial*

- *Loupe* versus *loop*

- *Facioplasty* versus *fascioplasty*

- *Allograft* versus *autograft*

Also, pay particular attention to the confusing terms defined on pages 8–10 of your textbook.

Take time to look up the definitions of all the words above. Practice saying them so that you'll recognize them when they're dictated. Each one of these words has an exact meaning. You need to be sure you understand the meaning and spelling of each word so that you can identify the correct word from the context of the dictation.

In addition to the many similar-sounding words, keep in mind that surgeons are very, very busy and are usually working under a great deal of pressure. They may dictate reports after performing six to eight hours of surgery or having been on call for many hours, so they may be speaking quickly or not as clearly as you might like.

Surgical dictation is very exacting. Surgical procedures are timed, as minutes or seconds can make a difference in the outcome of many procedures. As with all statistics in medical reports, these times must be accurately transcribed or questioned if they appear to be incorrect.

Surgical dictation will include many components, such as

- The time the procedure began

- The type and amount of anesthesia used

- The time required for the patient to reach the level of necessary sedation (sometimes called *paralysis*)

- The position in which the patient was placed

- All equipment used, including small equipment, such as scalpels or retractors, and large equipment, such as heart and lung bypass machines

- Type and dimensions of incisions and closures used and the condition of the patient throughout the surgery

In addition, the primary surgical dictator will include procedures done or assistance given by other members of the medical team, such as medical residents, surgical nurses and technicians, surgical specialists, anesthetists, and even pharmacists.

Staying Alert

The medical transcriptionist must be alert to ensure that dictated numbers coincide. You've probably heard a news report in which a piece of equipment is "left in" a surgical patient. Make sure you stay alert to equipment recovery when transcribing surgical dictation.

Like every other medical specialty, surgery and plastic surgery has its own language. With practice, you'll become accustomed to the names of surgical incisions, patient positioning, suture names, and techniques and laboratory tests.

Once you feel comfortable with all the terminology in today's material, move on to learn more about general and plastic surgery.

General Surgical Procedures

There's exact terminology used to indicate patient position for treatment, examination, and surgical procedures. You'll need to be familiar with the various positions used.

- Supine

- Sims

- Prone

- Horizontoal recumbent

- Trendelenburg

- Lithotomy

- Knee-chest

- Dorsal recumbent

Photos of the standard positions are shown on page 37.

To understand the body's regions, study the figures on page 36. When you feel confident you know where each region is located, make several sketches of a torso and label each region listed below.

- Epigastric

- Right and left laterals

- Umbilical

- Pubic

- Right and left inguinals

- Right and left upper quadrants

- Right and left lower quadrants

- Incisions

To get to the affected part of the body, surgeons need to make incisions. When dictating information about incisions, surgeons will probably describe the types of incision used. Here are some of the types of incisions.

- Midabdominal transverse
- Vertical midline
- Muscle-splitting
- Abdominal

The surgeon will also describe the length of the incision, the type of scalpel and assisting equipment used, and the appearance of underlying structures when first revealed by the incision.

Sutures

Surgeons use various ways to close wounds. If sutures are used, they can be sewn as any of the following types. Most of these types of closures are illustrated on page 38.

- Continuous
- Interrupted
- Pursestring
- Figure eights
- Vertical mattress
- Horizontal mattress (continuous or interrupted)
- Connell
- Lock stitch
- Y-sutures
- Harelip

Anesthesia

General surgeons and general plastic surgeons may operate on virtually any part of the body. All surgeries require some type of anesthesia. Can you name some of the drugs associated with following anesthesia types?

- General anesthesia

- Inhalation anesthesia

- Regional anesthesia

- Topical anesthesia

- Spinal anesthesia

- Epidural block

- Conscious sedation

Compare your answers to the information on anesthesia found on page 44.

Common Plastic Surgery Procedures

Common plastic surgeries include

- Chemical peeling

- Dermabrasion

- Mammaplasty augmentation

- Abdominoplasty

- Blepharoplasty

- Mammaplasty reduction

- Rhinoplasty

- Rhytidoplasty

- Suction lipectomy

Be sure that you can spell and define the procedures listed above before continuing on. You should have your medical references ready and waiting.

Helpful Hints

As you can see, there's a lot of information to assimilate when transcribing surgical dictation. With experience, you'll find which medical references help you the most, which terms you run into repeatedly, and which tend to give you the most difficulty. As you study and practice, you'll work out a system for overcoming difficulties and will become accustomed to all the terminology that accompanies minor and major surgeries.

You should be prepared to transcribe operative reports, consultations, referrals, and formal medical chart notes for surgeons.

Next, you'll get to learn a few tips directly from transcriptionists specializing in surgical dictation. As you'll see, it's great to get information from medical transcriptionists who do this work day in and day out. One way to pick up great tips such as the ones in the next section is to take advantage of the discussion boards on the various medical transcriptions Web sites mentioned previously.

Transcription Tips for General Surgery

Decubitis can mean "the position assumed when lying down," "lying on the left side," or "skin ulcer." Be certain to verify what the dictator is referring to when this term is used, to ensure accurate transcription. Here are some other tips.

- Surgeons may use metric or American measurements, but metric is the usual.

- Surgical measurements can include lengths of incisions, weight of removed tissues, and volumes of blood, plasma, or other fluids.

- If abbreviations are appropriate, be sure you know your ml from your mm (milliliter from millimeter).

- Sometimes, a surgeon may use less accurate, but descriptive measurements, such as a "fingerbreadth" or "the size of a five-cent piece."

- Transcribe as dictated, making sure you transcribe measurements accurately.

- You'll be hearing a lot of "-lysis," " -otomy," "-ectomy" and " -itises" with surgical transcriptions. You'll probably hear more terms for "blades" and types of skin than you ever thought possible.

Transcription Practice

Ready for some practice? Let's work on the following dictated reports. To complete the practice exercise, access the audio files for Chapter 2.

For your practice and required transcriptions, you'll need the following equipment and supplies:

- Computer with word processing software

- Transcribing software with foot pedal and earphones

- Printer

- Downloaded *Forrest General* transcription files

- Plain white typing paper ($8^1/_2 \times 11$ in.)

- Reference materials

- Extra printer toner cartridges and/or drums

Type each case, transcribing each report in the order given.

Practice Assignment

Access the audio files for Chapter 2 and transcribe the General Surgery Exercises TE#1–TE#8 on page 45. The solutions to your practice reports are the online Word files located on your My Courses page. Check your dictation against the answer key. If the dictation seemed difficult, replay the audio and read the answer key while you listen. Then, transcribe the dictations again.

Required Transcription Assignment for Chapter 2

For chapter 2, you're required to complete TE#9 Jeff Zaleski Operative Report (repair of abdominal aortic aneurysm).

Medical Terms/Phases, TE#9—Zaleski, Jeff		
1. Abdominal aortic aneurysm	9. large-sized	17. Prolene
2. Foley	10. aneurysm	18. DeBakey
3. Bovie	11. Super Stiff Amplatz	19. Arteriotomy
4. vessel loops	12. guide wire	20. backbled
5. Glidewires	13. wrap	21. Doppler
6. sheath	14. suprarenal	22. Ancure device
7. iliac anatomy	15. stent	
8. non-torturous	16. angiogram	

ASSIGNMENT 4: CARDIOLOGY

Before you begin this assignment, read pp. 47–59 in your *Forrest General* textbook.

Introduction to Cardiology

Many health care professionals have said that the human body has one major design flaw. The body was designed with two, three, or even four or more of some parts, such as eyes, kidneys, teeth, and muscles, but given only one of the most important part—the heart.

Cardiology is devoted to the study of the normal and abnormal functioning of the heart. Cardiologists see a variety of patients across the life cycle, in many stages of health and illness. They may team with exercise physiologists to monitor and improve the performance of athletes or "weekend warriors."

Cardiologists may be *interventional,* meaning that their work involves modifying the body. They perform surgeries, stenting procedures, or angiographies. Some cardiologists may be part of a transplant team, assisting in surgical procedures and before-and-after care for patients who have received transplants.

Cardiologists may also be *diagnostic,* meaning that they provide care for cardiac patients before and after surgery, but not during surgery. *Pediatric cardiologists* may perform delicate surgeries on very young infants to repair cardiac birth defects or deficiencies.

Transcribing for Cardiology

Cardiology transcription can range from simple and repetitive to challenging and unique, depending on the type of cardiologist for whom you transcribe. A cardiologist in small private practice may perform a lot of stress tests, echocardiograms, and EKGs and prescribe within a small range of medicines. On the other hand, cardiology departments in large health care facilities may offer you the opportunity to transcribe emergent care reports, CCU (cardiac intensive care unit) reports, admission and discharge summaries for cardiac patients, surgical reports, and rehabilitation orders. Consulting cardiologists may work with sports teams or with cardiac rehabilitation facilities to develop exercise and lifestyle routines and monitor performance and progress of patients and athletes.

Cardiologists and Their Associates

Cardiologists work with a wide array of medical personnel. They may work with cardiovascular technicians, nurses, nurse practitioners, and physician's assistants specializing in cardiology. Cardiologist might also work with physical and occupational therapists, rehabilitation specialists, registered dietitians, and pharmacists in addition to general surgeons, radiologists, and epidemiologists.

Cardiology Abbreviations and Terminology

To accurately and efficiently transcribe cardiology dictation, you'll need to be familiar with many cardiology terms. Can you spell (when listening) and define or locate the following terms? Study these and all the abbreviations and terms included in your reading assignment for this chapter.

- *Diastole* and *systole*

- *Arteries* and *arterioles*

- *Vessels* and *veins*

- *Capillaries* and *vascular systems*

- *Sinoatrial node* and *sinus rhythm*

- *Cholesterol* and *triglycerides*

- *Echocardiogram* and *Doppler ultrasound*

- *Angiogram* and *Holter monitor*

- *Myocardial infarction* and *arterial stenting*

- *Hypertension* and *sphygmomanometer*

Confusing Cardiology Terminology

Dictators may be in a hurry, may not dictate clearly, or may inadvertently use an incorrect term. Are you up to the cardiology term challenge? Explain the difference between the following terms.

- *Arteriosclerosis* versus *arteriostenosis* versus *atherosclerosis*

- *Arteritis* versus *arthritis*

- *Atrial* versus *arterial* versus *arteriole*

- *Arrhythmia* versus *eurhythmia*

- *Perfusion* versus *profusion*

- *Palpation* versus *palpitation*

- *Cuspis* versus *cuspid*

- *Vasodilator* versus *vasopressor*

- *Endocardium* versus *endothelium*

- *Cor* versus *core*

The transcriptionist's challenge is to record all of this in a professional, coherent, accurate manner. You may want to prepare flash cards with these terms and study them until you can recognize each term easily by sight and sound, spell it correctly, and know its definition.

Additional Cardiology Terminology

There are many words that have "cardio-" or "cardiac" in them. Take time to look up the meanings of the following words.

- Cardiomyopathy

- Cardiomegaly

- Cardiopathy

- Cardiopulmonary

- Cardiovascular disease

- Cardiospasm

- Carditis

- Cardizem (a calcium channel blocker, generic name: diltiazem)

- Cardiac output

- Cardiac insufficiency

- Cardiac murmur

- Cardiac stenosis

Also, be sure to know the correct spelling of these and other cardiology-related terms. You'll need to transcribe them properly and verify that they're being used correctly in context.

Transcription Practice

Ready for some practice? Let's work on the following dictated reports. Access the audio files for Chapter 3 and follow the directions given for the first set of practice transcriptions. Transcribe the Cardiology Exercises TE#1–TE#11, page 59.

Check your dictation against the online answer key. If the dictation seemed difficult, replay the audio and read the answer key while you listen. Then transcribe the dictations again.

Required Transcription Assignment for Chapter 3

For chapter 3, you're required to complete TE#12 Procedure Note Jason Hagler (dual chamber cardiac pacemaker).

Medical Terms/Phases, TE#12—Hagler, Jason		
1. DUAL CHAMBER CARDIAC PACEMAKER	8. skin-entry	16. sheath
2. atrial ventricular block	9. pectoralis	17. Oscor
3. postinferior MI	10. fossa	18. stylet
4. aortocoronary	11. Metzenbaum scissors	19. stay stylet
5. infraclavicular	12. Bovie	20. silica gel
6. Xylocaine	13. hemostasis	21. screw caps
7. guide wire	14. Trocar	22. wound
	15. Lead	

In the last three paragraphs of the report, the heading should be as follows:

EQUIPMENT
Bitronick[1] DDD pacer, Gemnose TC04, serial # 87006454.

ARTIAL WIRE
Oscor, model XY53, JV. Serial BIK27689. Resistance 670 ohms. P amplitude 2.4 millivolts. Pacing threshold 0.6 volts.

VENTRICULAR LEAD
Model MP53PB, serial 34340163, manufacturer Bitronick[1]. Pacing threshold 0.7 volts. R-wave 10.2 millivolts, resistance 650 ohms. Both artial and ventricular leads were bipolar sensing and pacing. AV delay paced was 180 msec. Hysteresis out. Rate 70. Upper tracking rate 130.

[1] Bitronick or Bitronic—Both spellings are acceptable.