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Medical Transcription Mini Course**

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MEDICAL TRANSCRIPTION COURSE OVERVIEW And APTITUDE ASSESSMENT

Overview:

The course is designed to provide an overview of typical medical transcription skills and training aptitude, so the student can assess the capability and interest level. It also provides an overview of the industry itself, job opportunities, certification, and other related information.

Assessment:

It is a self-assessing course wherein the student may quickly and easily establish the feel for the training process, try a few sample lessons, then make a determination as to whether the career is the right path for you.

PART I OVERVIEW OF THE PROFESSION

A. WHAT IS MEDICAL TRANSCRIPTION?

Let's break the word *transcription* down. The main word is *transcribe*: *trans-* is related to the word *transfer*, which is "to convey or cause to pass from one place, person, or thing to another": *scribe* is both a pronoun and a verb. A scribe (pronoun) is one who records things in written form; to scribe (verb) is to write or inscribe. Being a scribe in, say, ancient Greece, was a highly esteemed, well educated and highly specialized person and position in society due to various factors, not the least of which being that they possessed (and still possess) a natural penchant for accuracy. In some form or other it has existed since the dawn of civilization with rudimentary records in the form of drawings scratched onto prehistoric cave walls, clay tablets, hieroglyphics, parchment and finally to paper. The father of modern medicine, Hippocrates, had physician notes as a written record of medical actions and also served as a basic guide for reference for future patient care. Not much has changed, though obviously the use of the records has expanded exponentially to include the patient record and from that obtain all of the information used in the billing and reimbursement process.

The need for dead-on accuracy from transcribers of ancient times was due to the risk of creating distortions of meaning from one transcribed document to its successor document, parchment or tablet. Even one word wrong could lead to a completely inaccurate rendering two hundred years down the road. Accuracy in medical transcription is critical in the modern sense to ensure proper care delivery and clear communications among every facet of a record, its related diagnosis and procedure code, and billing, to say nothing of the risk management involvement on the legal side of things.

In the early 1900s, medical stenographers began taking dictation by shorthand; thereafter, dictation machines evolved. Virtually every visit to the doctor, every admission to the hospital, requires a comprehensive record of the encounter, including the diagnosis, treatment, and outcome. This is the material transcribed by the MT.

Physicians came to rely on the judgment and reasoning of experienced medical secretaries (as they were known in olden times prior to about 1966) to safeguard the accuracy and integrity of medical dictation, leading to medical transcription evolving into a medical language specialty. Medical transcription is one of the most sophisticated of the allied health professions, creating an important partnership between healthcare providers and those who document patient care.

B. TO PREPARE FOR THIS PROFESSION

To prepare, MTs-in-the-making study medical language, including Greek and Latin word origins, with the roots, suffixes (suffixes is the purer form), prefixes (same with prefixes), and compound words. The knowledge includes anatomy and physiology of all body systems and various disease processes. A cursory knowledge of the following is imperative:

- medical science
- medical and surgical procedures, involving thousands of instruments, supplies, appliances, and prosthetic devices
- pharmacology
- laboratory values, correlating laboratory test results with a patient's diagnosis and treatment
- use of medical reference materials and research techniques

C. RELATED KNOWLEDGE AND EXPERIENCE

- good keyboarding skills (50 and above WPM ideal) though with the exposure to actual transcription, slower skills usually markedly improve
- knowledge of word processors (WordPerfect, MSWord), and basic computer and software programs
- an interest in words as words, e.g., people who read a lot and have a good vocabulary understanding
- good spellers
- above-average knowledge of English punctuation and grammar
- good auditory skills, allowing the transcriptionist to interpret sounds almost simultaneously with keyboarding
- good proofreading and editing skills, ensuring accuracy of transcribed material
- versatility in use of transcription equipment and computers, since transcriptionists may work in a variety of settings
- highly developed analytical skills, employing deductive reasoning to convert sounds into meaningful form or make decisions about incorrectly dictated material

Keyboarding and transcription should not be confused. The primary skills necessary for performance of quality medical transcription are extensive medical knowledge

and understanding, sound judgment, deductive reasoning, and the ability to detect medical inconsistencies in dictation. For example, a diagnosis inconsistent with the patient's history and symptoms may be mistakenly dictated. The medical transcriptionist questions, seeks clarification, verifies the information, and enters it into the report. It's important to note that all of the natural talents we list above and below can be acquired as skills through training with even average abilities. There's no substitute for perseverance and hard work.

D. WHY HAVEN'T I HEARD ABOUT MEDICAL TRANSCRIPTION BEFORE?

While medical transcription is among the most fascinating of allied health professions, the general public knows little about this skill and who practices it, and even how it is done. It was not until 1999 that the US Department of Labor assigned a separate job classification (Standard Occupational Classification #31-9094) so that statistics could be gathered on medical transcriptionists. Before that, transcriptionists were misclassified as typists, word processors, medical secretaries, and dictating machine operators.

Medical transcriptionists work in settings that are usually far removed from the examining rooms, clinics, and hospital floors where health care is provided. Patients rarely have the opportunity to hear about those who transcribe their medical reports, and medical transcriptionists rarely meet the subjects of their work.

E. IS MEDICAL TRANSCRIPTION A GOOD HOME-BASED BUSINESS?

Many popular publications sing the praises of medical transcription as an easy home business, citing the potential for high income with little investment. However, we caution the student that failure to make the investment in quality education can result not only in business failure but also in shoddy documentation for the most important client—the patient.

Medical transcription is a medical language specialty. Fluency in this language is not accomplished merely by completing a basic terminology course and installing a spellchecker on a computer!

The transcriptionist working from home must make a significant investment in equipment and reference materials and be willing to make frequent updates to both in order to keep up with rapidly changing technology and terminology.

Because their services are in demand, transcriptionists are often able to arrange convenient and flexible work schedules.

Medical transcription is a portable skill that allows for professional and geographic mobility. Age restrictions are seldom found, with great value being placed on the experience and knowledge of the well-seasoned transcriptionist.

Medical transcription can be a lifelong, satisfying career, providing the constant challenge of an expanding and advancing technology. The changes occurring in the

healthcare industry promise to provide even more challenges to the forward-looking medical transcriptionist.

http://www.aamt.org/agate/aamt_oms/content/ Healthcare is a rapidly growing industry, and the demand for quality documentation is increasing. The profession provides a high level of job security, and skilled medical transcriptionists may receive a premium for their services.

F. CURRENT MARKET FOR TRANSCRIPTIONISTS

According to the American Association for Medical Transcription (AAMT), medical transcription is a \$15-17 billion industry with a double-digit growth rate. Industry associations typically use 250,000 as the average number of US medical transcriptionists, although the estimates range from 100,000 to 400,000 transcriptionists depending on whether full or part-time workers are counted. About 25% of medical transcriptionists (MTs) are sole proprietors operating home-based businesses. The remainder is about 60/40 working for medical transcription companies and hospitals-clinics-physicians' offices, respectively.

Medical transcription companies are typically entrepreneurial businesses that often start as sole practitioners working out of home offices and have fewer than 50 employees.

There has been a recent surge of merger and acquisition among MT companies creating some large competitors. However, according to Medical Transcription Industry Alliance (MTIA), there are still around 3,500 small and mid-sized firms competing effectively. It is difficult to predict whether the consolidation trend will continue. While profit margins stimulate the desire for scale, labor shortages, telecommunications costs, physician marketing provide countervailing pressures.

The growth in demand for medical transcription services comes from several factors. Recent changes in provider accreditation requirements have put more emphasis on the readability of medical record data, eliminating handwritten notes in medical records. Managed care has compressed the office time schedule for most medical providers; making outsourced medical transcription part of an office-efficiency drive. The Institute of Medicine has mandated the development of computerized patient record systems, increasing the requirement for computerized records. Finally, new federal regulations (HIPAA and HCFA) put higher emphasis on medical record accuracy and completeness. Medical transcriptionists are a key component in the medical records process from A to Z.

Competitive Factors - MT companies sell their services to all classes of healthcare providers—hospitals, clinics, medical and non-medical providers. They compete on the basis of response time, accuracy, and costs. Meeting transcription deadlines is an absolute requirement for a successful MT company. To increase competitiveness, MT companies tend to customize their services to particular provider types and specialties. Customization decreases the scope of terminology, anatomy, physiology, and disease processes that must be mastered, while maximizing opportunities for referrals from existing customers.

Years ago, MTs were considered "typists," but in large part, thanks to people like Meditec.Com's management staff and the AAMT, that attitude has changed. Transcriptionists are now highly respected and integral to the health care system and are in great demand. Future opportunities will materialize as a result of the language training and experience. New and exciting medical language careers will evolve. Watch for them.

MTs typically charge per line of transcription, and prices vary considerably across the country depending on local cost of living and level of competition. MTs are compensated based on per line or per word output, adjusted for errors. Standards are now pretty well established for what measurements exist for line determination.

BUSINESS FACTORS - Five business issues prevail across MT companies

- Shortage of experienced MTs
- Competitive pressures/opportunities posed by technology advances
- Dictation & transcription equipment and software technology
- New data transfer solutions
- Federal regulations on medical record privacy and communications

G. EQUIPMENT AND SOFTWARE

Medical transcription requires dictation/transcription systems, word processing software, modem and telephone connectivity, and computers.

(1) DICTATION SYSTEMS

Lanier and Dictaphone, Sony, Phillips, and VDI. Other products include BCB Voice Systems, Bytescribe, Careflow/Net, Crescendo, Digital Voice, Dolbey, and MedPen. Newer products that are Windows-based are gaining momentum.

a. DIGITAL DICTATION

Computerization has certainly impacted dictation media. Digital technology converts the analog voice to wave forms using the numbers that are the basics in all computers (0s and 1s). This results in a higher quality replication of the original voice.

The dictator from a doctor's office dials through a telephone to access the digital system. In a hospital or larger clinic access may be hard-wired rendering the telephone connect unnecessary. The dictator enters specified identifiers (author ID, work type, patient ID, etc.) through the telephone keypad or a bar code scanner. They can move around through the dictation more easily than on the earlier systems, to edit, refresh, stop or start.

When the dictation is being done, the voice is received by a board that digitizes and transfers it to a systems disk available instantly by any user who needs to hear the report, or transcribe it. The resident report may be assigned to the transcriptionist

through a management terminal, or by self-selection. For the transcription, the dictation is accessed either by phone, the Internet, or directly (with resident systems), and include options for a visual control (C-phone), or just with a foot pedal.

A remote transcriptionist may download the files to avoid long periods of time on a long distance carrier. More and more small, medium and large companies and even small privateers are using the Web to retrieve dictation and to deliver the resulting transcribed document.

(2) TRANSCRIPTION AND DATA TRANSFER SOFTWARE

a. WORD PROCESSORS

Most MTs use a business word processor supported with various medical transcription productivity tools. WordPerfect (Corel) and MSWord from Microsoft are widely used. Various spellcheckers focusing on medical terms are available; Spellex, and the traditional medical dictionaries (Dorland's and Stedman's) have spellcheckers. Programs are also available to speed the transcription process itself using speedtyping software. A very good program for that is Smartype. Smartype is unique speedtyping software, based upon a patented word-completion technology. It can save 70% of a transcriptionist's keystrokes -- while assuring correct spelling, capitalization, and hyphenation. Smartype goes way beyond conventional abbreviation expansion. Please check out the Tutorial with images at www.Smartype.com to see exactly how Smartype works. PRD+ is widely used for the same purpose. You can see other products by keying in "speedtyping" or similar words into search engines.

b. FILE TRANSFERS

Modem-to-Modem: The transcriptionist has completed the report, and the documents must be delivered to the physician, hospital facility, or Transcription Company. As one would guess, there are several methods to do this. The first is modem-to-modem transfer, in which one PC will "call up" the other and files will be transferred directly via phone lines into a database residing on the medical facility PC (or mainframe). Since file transfer depends upon the speed of the modems involved it may take a long time, and phone charges may be prohibitive. The documents are also available only on the one PC or network into which they were delivered. Lastly, a large medical facility's network and firewall protection may inhibit this type of delivery.

H. MEDICAL TRANSCRIPTIONISTS AS PROFESSIONALS

Since 1978, medical transcriptionists have been represented by a professional organization, the American Association for Medical Transcription (AAMT), which has developed a competency profile (COMPRO®) and a model curriculum for transcription educators, as well as a model job description. AAMT emphasizes continuing education for its members, holding an annual conference for medical transcriptionists, educators, supervisors and managers, and business owners. There are over 135 component associations of AAMT, each of which holds regular educational meetings and symposia.

http://www.aamt.org/agate/aamt_oms/content/

CERTIFICATION

In its training program, Meditec.Com provides a final examination, and a certification and letter of recommendation with a final examination score of 85% or better. This certification notes:

“The student has completed approximately 300 hours of instruction and 120 hours of transcription.”

If a student wishes to be designated a "Certified Medical Transcriptionist" (CMT), this credential is offered via a two-part exam administered by the Medical Transcription Certification Commission at AAMT.

APTITUDE INFORMATION AND EXERCISES

A. ENGLISH

To begin, we will review English and grammar. First, answer the questions, then check your answers. Carefully follow directions.

1. Circle the letter corresponding to the correct sentence
a. The patient's abdomen and chest was prepared and draped in the usual sterile fashion.
b. The patients' abdomen and chest were prepared and draped in the usual sterile fashion.
c. The patient's abdomen and chest were prepared and draped in the usual sterile fashion.

ANSWER 1 - c.

2. Spell the following words. If correctly spelled, write "correct" in the blank	
a. adbomen	
b. independent	
c. asscertain	
d. labratorie	
e. satelite	
f. surgeon	
g. stomach	
h. compatable	
i. clinikal	
j. taged	
k. aggresive	
l. pateint	
m. psichology	
n. resistence	
o. diarhea	
p. collecter	

ANSWERS – 2

- a. abdomen
- b. correct – hope you followed instructions and entered “correct”
- c. ascertain
- d. laboratory
- e. satellite
- f. correct
- g. stomach
- h. compatible
- i. clinical
- j. tagged
- k. aggressive
- l. patient
- m. psychology
- n. resistance
- o. diarrhea
- p. collector

3. Check the following sentences for grammar and punctuation and circle the most correct choice.	
a.	We will see how this medication affects the patient's seizures
b.	We will see how this medication effects the patient's seizures
c.	We will check the affect of this regimen in one week.
d.	We will check the effect of this regimen in one week.
e.	We saw Mr. Smith, and the patient's blood pressure was normal.
f.	We saw Mr. Smith, and the patients' blood pressure was normal.
g.	The patient was kept in ICU, with frequent monitoring of his status.
h.	The patient was kept in ICU with frequent monitoring of his status.
i.	The patient's height, weight, and blood pressure were checked.
j.	The patient's height, weight and blood pressure was checked.
k.	The child was awake alert and playful and eating well and ready to be discharged.
l.	The child was awake, alert, and playful, eating well, and ready to be discharged.
m.	Following administration of general anesthesia, the patient was placed on the operating room table.
n.	Following administration of general anesthesia. The patient was placed on the operating room table.
o.	One of the medications is an antibiotic.
p.	One of the medications are an antibiotic.
q.	Your sure you want to go visit your mother-in-law.
r.	You're sure you want to go visit your mother-in-law?

ANSWERS – 3 – a, d, e, g, i, l, m, o, r

B. DYNAMICS OF MEDICAL VOCABULARY AND WORD BUILDING

As in English, medical words contain *affixes* (more accurately, *affices*), which are *prefixes* (*prefices*) and *suffixes* (*suffices*) attached to roots. As you can see, for the sake of example, we've used the American (mis-) spellings by adding only "es" following the "x;" however, in medical usage the rule of thumb is to use the appropriate plural form as discussed in the previous section. The words may also have combining forms, which are accomplished by dropping letters at the end of the root and adding an "o."

1. PREFICES OR PREFIXES – ENGLISH			
<i>Prefix</i>	<i>Root</i>	<i>Word</i>	<i>Meaning</i>
pre-	school	preschool	before school
mis-	spell	misspell	incorrect spelling
inter-	lock	interlock	hook together
hyper	pituitary	hyperpituitary	overactive – too much pituitary
dys-	trophy	dystrophy	degeneration of or defective
uni-	lateral	unilateral	affecting only one side

NOW YOU TRY IT.

Make words with the following prefices and roots		
pre-	existence	
pre-	certify	
mis-	appropriate	
mis-	apply	
inter-	mingle	
inter	departmental	

2. PREFIXES OR PREFIXES - MEDICAL

Prefix	Meaning	Example
a-	without	aseptic
an-	not	anaerobic
ab-	away from	abnormal
ante-	before	antepartum
anti-	against	antiseptic
bio-	life	biography
brady-	slow	bradycardia
contra-	against or not	contraindicate
de-	take away/remove	dehydrate
dis-	reversal/separation	dislocate
dys-	painful/difficult	dysfunction
hemi-	half or one side	hemisphere
hemo-	blood	hemoglobin
hydro-	water	hydrodynamic
hyper-	too much	hypertension
hypo-	too little – not enough	hypoactive
inter-	between	intervertebral
intra-	within	intravenous
lip-	fat	lipoma
mal-	bad, poor	malnutrition
noct-	night	nocturia
poly-	many	polyuria
pre-	before	prenatal
post-	following, after	postoperative
tachy-	fast	tachycardia

PREFIX EXERCISES

Use the prefix "a-" (not, without), make the new word and define it in two or three words (feel free to use a dictionary, though if you don't have a medical dictionary, you won't find them all)

	Root word	New word	Meaning
1.	typical		
2.	symptomatic		
3.	septic		
Now add the prefix "an-" (not, loss of, absence of) to make the new word and define it			
4.	aerobic		
5.	osmic		
6.	ovular		
Now add the prefix "ab-" (away from)			
7.	normal		
8.	irritant		
Now add the prefix "ante-" (before)			
9.	partum		
10.	brachium		
11.	cubital		
Add the prefix "anti-" (against)			
12.	biotic		
13.	body		
14.	cholinergic		

Add the prefix "bio-" (life)			
15.	chemistry		
16.	logy		
17.	kinetics		
Add the prefix "brady-" (slow)			
18.	arrhythmia		
19.	esthesia		
20.	phemia		
Add the prefix "contra-" (against, not)			
21.	indicate		
22.	conception		
23.	lateral		
Add "de-" (take away, remove)			
24.	centralization		
25.	capitation		
26.	cannulation		
Add "dis-" (removal, separation)			
27.	locate		
28.	ease		
29.	order		
Add "dys-" (painful, difficult)			
30.	tocia		
31.	tonia		
32.	trophy		
Add "hemi-" (half/one side)			
33.	plegia		
34.	pylorectomy		
35.	spasm		

Add "hemo-" (blood)			
36.	cytoma		
37.	dynamic		
38.	cyte		
Add "hydro-" (water)			
39.	metry		
40.	phobia		
41.	thorax		
Add "hyper-" (too much)			
42.	active		
43.	ostosis		
44.	parathyroid		
Add "hypo-" (too little or under)			
45.	thyroid		
46.	dermic		
47.	natremia		
Add "poly-" (many)			
48.	uria		
49.	cellular		
50.	centric		

ANSWERS

1. not typical
2. without symptoms
3. without sepsis (pathogens)
4. without oxygen
5. absence of sense of smell
6. without ovulation
7. away from normal/not normal
8. away from irritant/not irritating
9. parting (predelivery – before delivery - obstetrical)
10. the “front” of the arm between the elbow and the wrist
11. in front of the elbow
12. destruction of life - kills bacteria most common meaning
13. an immunoglobulin
14. blocking the passages of nerves
15. life organisms and processes
16. study of living organisms
17. life organism movements
18. slow, irregular rhythm (heart rate)
19. slow or dullness of perception
20. slowness of speech
21. against what is indicated; not indicated
22. prevent conception/pregnancy
23. pertaining to the opposite side
24. away from the center
25. removal of head
26. removal of cannula
27. not located properly
28. not at ease
29. not in order
30. painful birth
31. disordered tone of muscle
32. disorder from defective or faulty nutrition
33. paralysis of one side of the body
34. excision of half of the pylorus
35. spasm affecting one side only
36. tumor containing blood cells
37. movements involved in blood circulation
38. any blood corpuscle formed
39. measurement of fluid
40. frightened of water
41. collection of water in the pleural cavity
42. too active
43. too much bone
44. too much thyroid
45. too little thyroid
46. under the skin
47. too little sodium
48. too much urine
49. multicellular
50. many centers

3. SUFFIX EXERCISES

The word *carcinoma* is based on the Greek word "karkin," meaning crab or cancer (think of the Zodiac), which becomes *carcin*; then the *suffix* is added, which, in this case, is *-oma*, meaning tumor or swelling. The expanded meaning is a malignant new growth. In the following sentences we will evaluate the root then add the suffix to make a word and discuss what the word means.

As in the example above, start with *fiber* (British = *fibre*), drop the "e," add the combining letter "o," then the suffix *-oma* and you have _____ (a tumor of the fiber - fibroma).

Now do the same thing with the root words on the left, and the suffix listed.

Formula: Root + suffix "-oma" = Word formed by adding "-oma"

a.	lymph	
b.	myel	
c.	glauc	

Now use "-cele"

d.	hydro	
e.	spermato	

Now use "-ectasia"

f.	telangi	
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Now use "-iasis"

g.	psor	
h.	candid	

Now use "-itis" (change the "x" to "g" on "i." And "x" to "c" on "j.")

i.	larynx	
j.	appendix	

Use "-malacia" (change the "a" to "o")

k.	ostea	
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Use "-osis" (drop the 'e')

l.	fibre	
----	-------	--

Use "-emia"

m.	an	
----	----	--

Use "-dynia" (drop the x) – add 'o'

n.	coccyx	
----	--------	--

Use "-gram"

o.	radio	
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Use "-megaly" (don't forget the rules – hint- add the combining letter "o" – since you have 2 consonants together)

p.	Organ	
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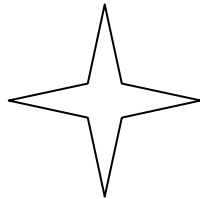
<p>Suffix Exercise: Surgical suffices such as -ectomy, (removal) -tomy, (making an artificial opening into) -otomy, (cutting or incision) -rrhaphy, (suture or repair of), pexy, (fixation), -plasty, (plastic surgery), -tripsy (crushing) and -centesis (perforation or tapping)</p>	
q.	If -ectomy means removal of, and appendix is a body part, then an appendectomy means removal of the
r.	If -otomy means cutting into, and larynx or its combining form laryngo- means the voice box, then laryngotomy means
<p>If "gastrium" (for our purposes, "gastr" since we are dropping the "um" means the stomach, do the following - and change the "i" to "o" (you may refer to the above suffix listing):</p>	
s.	Make a hole in the stomach (cut into)
t.	Bring an opening from the stomach to the outside of the body
u.	Remove the stomach
v.	Repair the stomach
<p>If "hyster" means uterus, do the following:</p>	
w.	Remove the uterus
x.	Make a hole in the uterus
<p>If "arthr" means joint, do the following</p>	
y.	Perform plastic surgery on the joint
z.	Fix the joint
<p>zz. If "pleur" means lung, remove fluid from that organ</p>	

	ANSWERS - SUFFIX EXERCISES
a.	lymphoma
b.	myeloma
c.	glaucoma
d.	hydrocele
e.	spermatocoele
f.	telangiectasia
g.	psoriasis
h.	candidiasis
i.	laryngitis
j.	appendicitis
k.	osteomalacia
l.	fibrosis
m.	anemia
n.	coccydynia
o.	radiogram
p.	organomegaly
q.	appendix
r.	cutting – making a hole in the larynx
s.	gastrotomy
t.	gastrostomy
u.	gastrectomy
v.	gastrorrhaphy
w.	hysterectomy
x.	hysterotomy
y.	arthroplasty
z.	arthropexy
zz.	pleurocentesis

4. COMPOUND WORD EXERCISE

Using the rules in the foregoing, **Make compound words from the following root words.**

	ROOT 1	ROOT 2	COMPOUND WORD
a.	cardiac	vascular	
b.	anterior	lateral	
c.	thoracic	lumbar	
d.	acromion	clavicular	
e.	glomerular	nephritis	
f.	uterine	sacrum	
g.	gastric	colic	
h.	vascular	thoracic	
i.	glenoid	humerus	
j.	cricus	pharyngeus	
k.	lymphus	angial	
l.	nasal	pharynx	
m.	thyroid	arytenoid	



COMPOUND WORD ANSWERS

- a. cardiovascular
- b. anterolateral
- c. thoracolumbar
- d. acromioclavicular
- e. glomerulonephritis
- f. uterosacrum
- g. gastrocolic
- h. vasculothoracic
- i. glenohumerus
- j. cricopharyngeus
- k. lymphangial (did this one trick you?)
- l. nasopharynx
- m. thyroarytenoid

5. PROOFREADING/EDITING

In the following reports, read each word carefully in the context in which it is used. You won't necessarily have the ability to recognize misspelled medical words, but you should find most of the other types of errors. There are 8 of them you should be able to locate. Use your dictionary if in doubt.

HISTORY OF PRESENT ILLNESS: The patient is an 86 year-old female from a nursing home, RRR Center. The patient's past history was significant for insulin dependent diabetes mellitus, right cerebrovascular accident with left hemiparesis in 2/02. PPD positive. Status post INH therapy, and hypothyroidism. The patient's most important past history included recent multiple urinary tract infections with at least one or more episodes of pyelonephritis. The last urinary tract infection (UTI) was treated in 4/01. The patient was brought in by EMS for complaints of fever and decreased mental status per the nursing home. The patient was not verbal but was awake looking around reaching for objects, etc. The patient, apparently, had a baseline history of being chronically confused.

PAST HISTORY: Surgeries were previous colectomy with colostomy for chronic constipation, a cholecystectomy, abdominal hysterectomy. Meds on admission were phyllium, ½ tsp. q.a.m., insulin 70-30, 10 units q.a.m. and 8 units q.p.m., estrogen cream .625 mg 3 x a week. She had no known allergies.

PHYSICAL EXAM: She was an alert elderly female looking around with a temperature of 103.1 F, pulse of 136, respirations 22. HEENT revealed pupils, which were equal and react to light and accommodation. The patient would not permit the fundus exam, was pushing examiner's hand and light away. Oropharynx was clear, but slightly dry, there were no exudates. The tympanic membranes bilaterally were scarred. Chest had fine basilar crackles bilaterally. Neck was supple without lymphadenopathy, no JVD or thyromegaly. Heart was regular rate, without murmur, gallop, or rub and a normal S1/S2. Abdomen was soft, nontender, nondistended, good bowel sounds. The colostomy site was pink and there was a peristomy hernia. Extremities showed no clubbing, cyanosis or edema. There were contractures of the left leg and leg arm. There was mild nonpitting in both legs. Neuro exam was positive for the patient being nonverbal moving both right arm and leg spontaneously, and absent reflexes in the left knee.

LABORATORY DATA: Laboratory data revealed white count of 22,000, hemoglobin 13, platelets 126,000. There were 91% neutrophils, 3% bands, 2% lymphs, and 3 monocytes. Chemistry shows a sodium of 141, potassium 4.0, chloride 107, bicarb 17, BUN 24, creatinine 0.7. Calcium is normal at 8.9, SGOT 24, alkaline phosphatase 80, total bili 1.4. Chest x-rays showed kyphosis but no acute changes. Amylase was 23.

Nine errors are present, list them:

See next page for answers

ANSWERS

resent – recent

off - of

cronically – chronically

alergies – allergies

accomodation – accommodation - did we get you there – that one is on a list of “most often misspelled words”

scared - scarred (a common error with an entirely different meaning)

Gallup – that’s a city in New Mexico, the heart has a gallop (like a horse)

spontaneously – oops, left out the o – spontaneously

6. ANATOMY

a. SPINE

The main support system for the entire body is the spine. It is made up of small bones called **vertebrae** (a single vertebra is pluralized by adding the “e”). The ribs curve out from the vertebrae and move around the front of the body to cover the chest cavity. The lower vertebrae are the thickest and heaviest since, dynamically, they hold most of the skeletal weight.

The spinal cord runs through these vertebrae and is the information superfreeway of the nervous system. In adults, it is about 18 inches long and stretches from the brain to just below the lowest vertebra of the chest cavity.

To prevent the bones from grating against each other, cushions of soft **cartilage** are present between the vertebral bodies. This soft cartilage cushions and absorbs the shock for both the spinal bones and the brain.

Throughout the day, sitting and standing, gravity pulls the spine earthward. The discs are pushed closer together and create a shorter body by the end of the day (as much as one quarter to one half inch). It returns to its normal shape while sleeping so that in the morning it has resumed its normal height. The discs in the spine are designed for flexibility, and by their “universal” mechanical design allow one to turn and bend in many directions.

The vertebrae (spinal column) has 33 bones. The seven vertebrae in the neck are called the **cervical spine** or C-spine (older women with a dowager's hump, sometimes develop osteoporosis, will find those humps right around C6 [or C-6] and C7). The next 12 are called the **thoracic spine** or T-spine. The lower vertebrae below the thoracic spine are five in number and are called the **lumbar spine** or L-spine. Then the next five are designated as the **sacral spine**. At the base of the lumbar spine is the **sacroiliac joint**, then the **sacrum**, and last of all, the little bone at the terminus (ending, like a train track's terminal or computer terminal, where the direction of communications is only back the same way you've come) of the spine is called the **coccyx**. There are four vertebrae located here.



QUIZ

1. What is the plural form of vertebra

2. How long is the spinal column in an average adult

3. What function does the cartilage serve

4. How many bones are located in the spinal column

5. The neck vertebrae are called

6. The vertebrae below the neck at the top of the back are called

7. The lower vertebrae are called

8. At the base of the spine is located the _____ and then
the

9. The terminal spine is called the _____

ANSWERS

1. vertebrae
2. 18 inches
3. cushions
4. 33
5. cervical or C-spine
6. thoracic or T-spine
7. lumbar or L-spine
8. sacroiliac and then the sacrum
9. coccyx

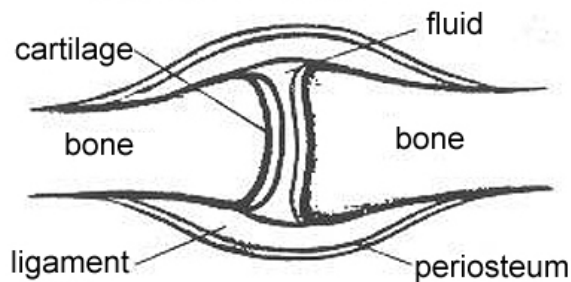
b. JOINTS

The long and short bones are hooked to joints. Some joints are astonishingly movable, almost going through a full circular rotation. Not all joints are movable (the skull has joints which become fixed after infancy and which do not move thereafter). The hip, shoulder and thumb joints are those allowing movement in almost any direction.

The ends of the bones to be attached to the joints have a smoothed cartilaginous finish where they enter into the joint capsule. The joint capsule itself is filled with fluid-like oil called *synovial* fluid much like motor oil in a car, used to prevent friction. Some joints also have what are called *bursal* sacs (little sacs filled with fluid) acting as shock absorbers.

When the joints are injured, they hurt (this is *not* a theory!); injuries include rupture of the bursal sacs which may create *bursitis*; stretching a joint too far causes sprains, strains and tears; pulling too hard may cause the joint to become dislocated (where the bone is pulled out of the joint socket). Wear and tear (a constant problem) ultimately create some form of problem(s), arthritis being a common one, which can also be attributed to improper maintenance of the body *machine* (nutrition).

WHERE TWO BONES MEET



QUIZ

1. What kind of a finish do the bones have when they enter the joint capsule

2. What purpose does the fluid in the joint serve

3. What is it called

4. What is the name of the sacs serving as shock absorbers

5. When bursal sacs rupture, they cause

6. What is a common problem of wear and tear

ANSWERS

1. smoothed cartilaginous
2. prevents friction
3. synovial fluid
4. bursal
5. bursitis
6. arthritis

THIS BRIEF EXPOSURE TO ANATOMY
GIVES YOU AN IDEA OF WHAT YOU WILL LEARN
AND HOW IT IS PRESENTED IN THE
TRAINING PROCESS

8. SUMMARY

We sincerely hope you enjoyed your venture into the possibilities of medical transcription. You should have gained a real feel for what it's all about and whether it is a career possibility for you. If you decide to pursue it, visit us at <http://meditec.com> to see descriptions of the program.

We thought you also might be interested in a few comments from people who decided to pursue a career in medical transcription.

Mary M: As one medical transcriptionist puts it, "I love what I do. I work next to a registered nurse turned transcriptionist, a science teacher working part-time in the field, and a biologist. I learn new terms every day, and I am never bored. My fellow medical transcriptionists are intelligent and interesting."

Constance K: "I would like to tell you that I have never been happier in any endeavor than I am with this program. Even when I attended college at the age of 36 years, I was not as excited. I spoke with someone in a game room the other night, and they told me that they had tried a program for medical transcription, but found it too confusing. I let them know that yours is not confusing, but is rather so exciting that it is difficult to remain seated to do it.

"As a former teacher, albeit kindergarten, I know when someone has the gift for teaching, and you do. This class is a lot like teaching kindergarten, because you are giving us the basics, and building a foundation. I do not know if you realize it, but people learn in three ways: 1) sight, 2) sound, and 3) sensory. You address all three of these genres... sight of course looking at the monitor and/or the books, sound listening to the CDs, and sensory giving us, the students, the feel of the actual hospital room (doctor's office) as you describe the scene in the summaries or surgical reports.

"I could hear the sounds of the ambulance when people are admitted through the emergency room, and I could see the patient sitting on the examination table explaining their illness to the doctor, with the doctor thinking and voicing what s/he thinks is the illness, and his/her assessment and plan (as I read the S O A P... great acronym). I could also smell the formaldehyde, and feel the chill of the morgue and yes even see the body on a steel slab as I transcribed an autopsy report.

"You make the course so interesting; believe or not I went through Volume One twice because I enjoyed it so much. I did shock my husband when I went over with him what I had learned. I told him barium is what you do to a patient when they die, that protein meant I was in favor of youth, and that artery was the study of fine paintings. I had to catch him before he emailed you for a refund... ha-ha.

"Just when it seems our brains would turn to mush for all we are inculcating into them, you drop a humorous caption or thought.

"All in all, if I were auditing this program to evaluate its value and its potential for turning out exceptional transcriptionists, I would have to give it a Superior rating.

"Last but not least, in your Earn and Learn Program, I am happy to report that I was hired by Sten-Tel, Inc. in April of this year and things have been going great. They have an editing program for new transcriptionists that I am in until June 1st and then I go to live work by myself. The hours are flexible and I am working from home and loving it!

"In closing, thanks for having the patience and fortitude that it took to bring this program to fruition."