
Introduction to Allied Health

INTRODUCTION

Thanks to changing technology and advances in medicine, health career opportunities are growing rapidly. Managed care and cost containment are also shaping the health care industry. There's more of an emphasis on providing services on an outpatient (or ambulatory) basis, limiting unnecessary services, and stressing preventive care that reduces the cost of undiagnosed and untreated medical conditions.

Advances in information technology also continue to improve patient care and worker efficiency with devices such as handheld computers that record medical notes for each patient. Patient information is then electronically transferred to a main database, which creates an electronic medical record. This process eliminates paper, reduces documentation errors, and makes patient information instantly accessible. These changes create new health care job opportunities within the industry, especially in the health information management profession.

According to the *Occupational Outlook Handbook*, published by the U.S. Department of Labor, Bureau of Labor Statistics, the following developments in health care are foreseen:

- Health services will add 2.8 million new jobs as demand for health care increases.
- Health information technology is one of the 20 fastest-growing occupations.
- Medical Assistants held approximately 527,600 jobs in 2010.

- The job outlook for Medical Assistants is growing much faster than average at 31%, with the field expected to add approximately 162,900 jobs between 2010 and 2020.
- Medical records and health information management technicians held approximately 179,500 jobs in 2010.
- Approximately 4 of 10 jobs are in hospitals. The remaining are mostly in nursing homes, medical group practices, clinics, and home health agencies.

That's great news for you! You've chosen one of the fastest-growing health professions in the United States. The increase in health information management technician jobs has been attributed to an increase in the number of medical tests, treatments, and procedures. These increases will in turn increase use of health information by third-party payers, regulators, courts, and consumers. This increase in the need for health information will increase the need for health information management technicians to be responsible for the information. In addition, you'll be entering the field just when the possibilities are growing. That means that many new and exciting opportunities, roles, and settings will be available to you. Health information management technicians no longer have to work only in hospital settings. Today, there are a wide variety of settings and roles that health information management technicians can fill. If you're interested in a specific area of medicine or health care, chances are that you can find a position in that area as a health information management technician.

Health information management professionals have the best of all worlds in health care. As a health information management professional, you combine health care education, knowledge of medicine and clinical practices, legal and financial aspects of health information, and business practices. Few other health care professions offer such an extensive combination and expertise level in such a wide range of professions. As a health information management professional, others in the health care industry look to you for your expertise in

disease processes and how they relate to reimbursement, correspondence management, and data and health information management. You've chosen a very challenging and rewarding health care career path.

Before we discuss your specific role as a health information management technician, let's first review the history of medicine, which will give you a greater understanding of the industry.

HISTORY OF MEDICINE

According to *Merriam-Webster's Dictionary*, medicine is defined as “the science and art dealing with the maintenance of health and prevention, alleviation, or cure of disease.” Although this is a recent definition, it still applies to medicine from centuries ago. Medical and health care practices have changed and evolved, but the basic concept of alleviation or cure of disease has remained the same.

Early medicine had its roots in practices that would be considered strange or unethical by today's standards. Even though some of these practices seem unusual, each new approach and discovery moved the medical field forward and helped us arrive at the point we're at today. We can learn a great deal about the evolution of medicine by studying the past (Figure 1). To understand the role you'll play in the health care field, it's important for you to first thoroughly understand the history of medicine and how medical and health care practices were documented throughout the years. Understanding how far the documentation of health information has come over centuries will help you truly appreciate your role as a health information management technician.

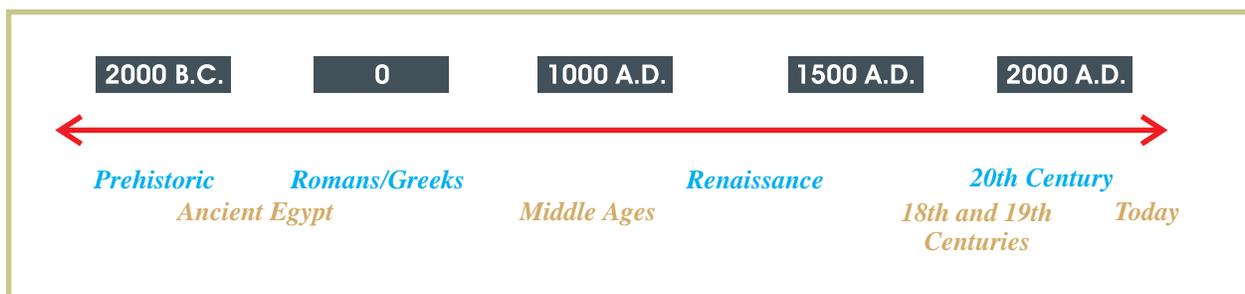


FIGURE 1—Historical Time Line

Prehistoric Medicine

Because we have no written documentation, our knowledge of prehistoric medicine is based on speculation from archaeology findings and studies. *Archaeology* is the study of materials from and related to humans who lived in the past. Archaeologists have studied prehistoric bones and tools to help us understand the diseases, illnesses, and treatments that were prevalent during that time period. For example, by studying human skulls, findings have led us to believe that during this time a procedure called trephination was used. *Trephination* was the practice of drilling a hole in a person's skull to relieve pain. Historically, illnesses and diseases were thought to be caused by evil spirits. It's believed that this procedure was performed to release those evil spirits. Study of materials such as rocks have revealed the types of tools that were used for surgery during that time.

Ancient Egyptian Medicine

Around 3000 B.C., people began to keep written records. Some of our earliest forms of medical records came from Egypt. These records were actually drawings and symbols known as *hieroglyphics* that provided information on illnesses and diseases, treatments that were used, and operations performed during ancient Egyptian times.

The Egyptian medical system was developed over a period of 3,000 years and greatly improved medicine. Egyptian medicine was actually quite advanced for its time. Egyptians based much of their medical knowledge on observations and trial-and-error processes; we still use some of these methods today. The documentation that has been studied from that time shows that the Egyptian people had a good understanding of the human body and some treatments. Most of their knowledge was based on what they learned during the processes of mummification and autopsy.

Mummification was the process of preserving the appearance of people after they died. The Egyptians believed that the deceased needed their bodies in the next life. In the mummification process, many of the person's internal organs were removed.

Removal of organs may have allowed the Egyptians to study the human anatomy, leading to a greater knowledge of the body and how it works.

Two important Greeks who were involved in medicine, Hippocrates and Galen, acknowledged that their Egyptian predecessors contributed to the Greek system of knowledge and medical beliefs. We'll discuss more about these two important historical figures and their contributions to medicine in the next section.

Greek and Roman Impact

Around 400 A.D., the Romans conquered Greece and created a new empire. There was a mixing together of knowledge from both cultures. This led to improved knowledge and new concepts that were spread across the new empire. One important factor that helped in disease containment at this time was building architecture. The Romans and Greeks built stone buildings that were much healthier and more sanitary than previous buildings. These new buildings helped contain and reduce the spread of disease. The Romans seemed to understand that there was a link between dirt and diseases, so they built baths, sewers, and aqueducts to carry water. Also during this time, the Romans were experimenting with herbs to treat illnesses.

Documentation of medical records and treatment was handwritten during this time. The Greeks created medical terms and books and documented clinical cases. Much of the medical terminology that we still use today has its basis in the Greek language.

Two men had significant impact on medicine during this time. The first was a Greek named Hippocrates, regarded as the “father of medicine.” He believed that the body was made up of four “humours” and that diseases were caused by an imbalance in these humours. Because Hippocrates refused to attribute illnesses and cures to the mythological gods of that time, he was a major player in transforming medicine from a religion to a science. Today, physicians still observe the *Hippocratic oath* based on Hippocrates’s beliefs (Table 1). This is the oath that medical students take when they become doctors.

Table 1

A VERSION OF THE HIPPOCRATIC OATH

You do solemnly swear, each by whatever he or she holds most sacred

That you will be loyal to the Profession of Medicine and just and generous to its members

That you will lead your lives and practice your art in uprightness and honor

That into whatsoever house you shall enter, it shall be for the good of the sick to the utmost of your power, your holding yourselves far aloof from wrong, from corruption, from the tempting of others to vice

That you will exercise your art solely for the cure of your patients, and will give no drug, perform no operation, for a criminal purpose, even if solicited, far less suggest it

That whatsoever you shall see or hear of the lives of men or women which is not fitting to be spoken, you will keep inviolably secret

These things do you swear. Let each bow the head in sign of acquiescence

And now, if you will be true to this, your oath, may prosperity and good repute be ever yours; the opposite, if you shall prove yourselves forsworn.

Claudius Galen was one of the most famous Greek doctors in the Roman Empire. Galen was influenced by Hippocrates' ideas, and he educated himself in anatomy and surgical skills by dissecting and studying animals. During this time, scientists and physicians couldn't dissect and study human cadavers as medical students do today, so they had to use animals to learn. What Galen learned from his study of animals, he then applied to humans and medicine. His discoveries about the body helped improve surgery by improving surgical skills and instruments. Galen's ideas dominated medicine throughout the Middle Ages. Some of Galen's discoveries are still used in current medical practices. For example, Galen developed the practice of taking a patient's pulse, a practice that's still used today. Galen's ideas and books were used through the Renaissance period and sixteenth century.

The Middle Ages

Even with the previously mentioned medical advancements, people in the Middle Ages (around 1000 A.D.) were actually less healthy than people from prior ages. The collapse of the Roman Empire brought poorer and dirtier living conditions,

and most of the prior medical information was lost. The cause of disease during this time was controversial. Some thought diseases were punishments from God. Others believed that diseases were linked to astrology and the position of stars. Still more people thought that there were invisible poisons in the air making people sick.

During this time, a disease called the *bubonic plague* started in Asia and spread to Europe. Because there was no understanding at that time of what caused the plague, there was no cure. Thus, a great number of people died from it. Later studies showed that fleas and rats carried the disease.

During the Middle Ages, there was very little advancement in medicine and the way that records were kept. However, one advancement that did occur was an increase in the number of doctors compared to previous years. This increase was due to the Crusades and other conflicts, which increased the need for treatment of the injured. During this time, it was rare for women to be considered doctors. If women tried to practice medicine, they were hanged as witches. Other advancements included the use of wine as an antiseptic to treat wounds topically and opium to anesthetize patients.

The Renaissance Period

The Renaissance period refers to the time from approximately 1450 through the 1600s. It was a period of revival of Greek and Roman ideas about medicine. Books and medical documentation were printed, whereas previously they had been handwritten. This meant that medical information was easier to read, more accurate, and could be distributed more quickly.

An advancement from Galen's time was that scientists were allowed to dissect human corpses. This allowed artists to more accurately draw the human anatomy for medical books. For the first time, scientists could study exact drawings of the human body.

Great advancements were made in medicine during this time. In the early 1600s, William Harvey published a new theory that blood was pumped through the heart. He also conducted experiments to illustrate the pumping of the blood through

arteries and veins. At that time, people didn't know about blood pumping through the heart, arteries, and veins. In addition, explorers of new worlds were bringing back new plants to be used as medicines. Unfortunately, they also brought back new diseases such as *smallpox* and *measles*. At that time, people didn't have natural immunity to these new diseases, and many died.

The Eighteenth and Nineteenth Centuries

Industry rapidly expanded during this time period. A growing number of people were moving to large towns to work in the new factories. Because towns grew quickly with the influx of people, overcrowding and filthy conditions caused diseases like *cholera* to spread rapidly (i.e., through infected food and water).

Cholera is an acute infectious (but noninvasive) disease that's caused by the bacterium *Vibrio cholerae*. The major symptom of this disease is massive watery diarrhea.

Medical advancements were great during this time period. Edward Jenner developed a vaccine for smallpox, the disease that was brought by explorers from other countries. Louis Pasteur and Robert Koch proved that bacteria, commonly called *germs*, caused disease. This discovery then led to the development of new medicines and vaccines. Florence Nightingale also set standards for nursing and hospital settings, which helped improve the care of hospital patients.

Additional advancements were also made in surgery and equipment. Surgery became safer due to the use of better surgical instruments and antiseptics. Sterilization techniques were developed for surgical instruments to reduce the risk of infection. Another advancement was the development of X-ray photography.

During this time, physicians were responsible for documenting the patient's medical record. This meant that they wrote all the patient's documentation in the record and were often responsible for keeping and storing the record. However, there was no standardized filing system.

The Twentieth Century

The medical field saw great changes in the twentieth century—probably more changes than in all the other years put together. During the first half of the century, blood groups, blood clotting factors, transfusions, insulin, and vaccines for diphtheria and tetanus were discovered or developed. In addition, Alexander Fleming discovered a type of mold that was capable of killing some microorganisms. This led to the development of the first antibiotic, penicillin. Today, we have a variety of different penicillin families that treat a vast array of bacteria.

During the second half of the twentieth century, new technology and scientific experiments helped advance medicine quickly. Some of the advancements included

- Prevention of disease by routine immunization
- New technology to help diagnose disease (ultrasound, electrocardiographic, magnetic resonance imaging, and computed tomographic studies)
- Laser surgery and organ transplantations
- Discovery of DNA and human genes

There were also changes in how medical records were kept. By this point, people understood how important it was to document a complete picture of the patient's illness in the medical record. Also during this time, standardizations for the content and filing of medical records were being implemented.

Like all other centuries, the twentieth century also saw negative developments. Third-world countries still suffered conditions like those from the Middle Ages. Also, acquired immunodeficiency syndrome (AIDS) spread rapidly and killed many throughout the world. Today, we're still battling the effects of AIDS as well as researching a cure.

A summary of historical medical advancements is presented in Table 2.

Table 2

ADVANCES IN MEDICINE THROUGHOUT HISTORY

Prehistoric Period

No written records revealed by archaeology findings
Evil spirits caused disease

Ancient Egypt

Written records in form of symbols and drawings
Greatly improved medical practices
Study of anatomy via mummification

Greek and Roman Period

Disease containment via stone buildings
Handwritten documentation
Hippocrates advances medicine from religion to science
Galen learns anatomy by dissecting animals

Middle Ages

People less healthy compared to previous years
Little advancement in medicine
Increase in number of physicians

Renaissance Period

Revival of Greek and Roman medical ideas
Documentation now printed—distribution of medical information faster and easier
First time scientists can study exact drawings of human anatomy
William Harvey publishes circulation theory
Smallpox and measles kills many people

Eighteenth and Nineteenth Centuries

Rapidly growing industries
Overpopulation causes rapid spread of disease
Pasteur and Koch prove germs cause disease
Florence Nightingale sets standards for nursing and hospital care
Physicians become responsible for patient medical records
Medical stenographers assist in medical records documentation

Twentieth Century

Great medical changes occur
Fleming discovers the mold that led to the development of penicillin
Increased awareness of diseases like acquired immunodeficiency syndrome

Twenty-First Century

Focus on cost containment
Focus on wellness instead of just sick care
Technology playing increased role
Move to electronic health records

Summary

Your new knowledge of the history of medicine will help you as you study and learn in the health care field. The history of medicine will give you a better understanding of why medicine and health care practices work in a particular way. In the next section, we'll review the history of medicine specifically related to the United States.

Now, review the material you've studied here. Once you feel you understand the material, complete *Self-Check 1*.



Self-Check 1

At the end of each section of Introduction to Allied Health, you'll be asked to pause and check your understanding of what you've just read by completing a "Self-Check" exercise. Answering these questions will help you review what you've studied so far. Please complete Self-Check 1 now.

1. Why is it important for a health information management technician to understand the history of medicine?

2. Who kept the earliest forms of written medical records? What was the form of those records?

3. Who was known as the "Father of Medicine"? What was named after him and is still used by medical students and doctors today?

Questions 4–9: Identify the person or people associated with each description.

- _____ 4. Self-educated in anatomy and surgical skills by dissecting animals
- _____ 5. Discovered a mold that led to the development of penicillin
- _____ 6. Proved that germs cause disease
- _____ 7. Developed a vaccine for smallpox
- _____ 8. Set standards for nursing and hospitals that improved patient care
- _____ 9. Developed the theory that blood pumped through the heart

Check your answers with those on page 77.

ROLE OF HEALTH INFORMATION MANAGEMENT PROFESSIONALS IN HEALTH CARE

Health information management professionals provide many basic and supporting functions that are critical in health care. Your success in this industry depends on certain skills and personality traits. You'll often be working with people and information of a personal, sensitive, or confidential nature. Because of the information's sensitive nature, it's important that you have certain character traits and human relations skills. You'll also rely heavily on language skills, technical and computer skills, and medical knowledge.

Although the major function of the health information management professional is to ensure the safe storage and retrieval of patient information, the health information management professional may also fill other roles, such as coding specialist, transcriptionist, and privacy officer.

No matter what setting or role, one factor remains consistent—as a health information management professional, you'll be responsible—in some form—for the storage, retrieval, accessibility, confidentiality, and security of patient data. A health information management technician needs a strong clinical background to analyze the contents of health records and a strong knowledge of medical terminology, anatomy, and physiology.

Because you're working in the field of health care, you must also have an ethical character and be able to keep information confidential. This means that you can't reveal any information that you've learned about a patient to anyone who doesn't legally have access to the information. You must ensure privacy, confidentiality, and security of patient information at all times—no matter what particular health information management career path you decide to pursue.

Education

Initially, there were no formal education programs for health information management professionals. Early medical record clerks learned in the same manner as early medical students—mainly under an apprentice system. This situation changed significantly when decision makers at the AHIMA realized that there was a need for a standardized curriculum to train medical record (or health information) professionals. Today, we have many different accredited schools for health information technology.

Education and credentials vary for health information management professionals. Health information management technicians entering the field usually have an associate's degree. In addition to general education, course work for the associate's degree includes medical terminology, anatomy and physiology, legal aspects of health information, coding and abstraction of data, statistics, database management, quality improvement methods, and computer training. Some students in health information technology programs have also taken biology, chemistry, health, and computer courses in high school. Upon completion of the associate's degree, many health information technology students receive their RHIT credential. Professional credentials are achieved through a combination of education and performance on a national exam. Once you receive your credential, you must maintain it through a continuing education (CE) cycle. In addition to the RHIT credential, some students also receive a specialized credential in a specific area of expertise, like coding or privacy. AHIMA offers a variety of specialty credentials (Table 4). A complete description of AHIMA credentials appears in the "Professional Organizations" section.

Table 4

CREDENTIALS AVAILABLE THROUGH THE AMERICAN HEALTH INFORMATION MANAGEMENT ASSOCIATION (AHIMA)

- Certified coding assistant (CCA)
- Certified coding specialist (CCS)
- Certified coding specialist–physician-based (CCS-P)
- Registered health information administrator (RHIA)
- Registered health information technician (RHIT)
- Certified in health care privacy (CHP)

The following credentials are offered jointly through AHIMA and the Health Information Management Systems Society:

- Certified in health care security (CHS)
- Certified in health care privacy and security (CHPS)

Skill Sets

There are basic sets of skills that are important for health information management professionals. In addition to an ethical character, you must also be organized and detail-oriented. Health information management professionals are expected to handle a great deal of information and juggle many projects at one time, often in a fast-paced environment. Being organized and paying attention to detail will help you be successful in this field.

Good understanding of medical terminology. Even though you won't work directly with patients on a regular basis, you must still possess a thorough understanding of medical terminology, disease processes, and treatments. Depending on the career you choose in this field, you may be analyzing health data and information on a daily basis. Or, you may be speaking with patients about their health information. You'll also be dealing with clinicians on a regular basis. It's extremely important that you can speak in a knowledgeable way concerning the patient's health care information. Whatever the case, you must understand medical terminology and how to pronounce the terms correctly.

Computer literacy. Due to the evolving nature of this field and technologic advancements, much emphasis is placed today on computer skills. Although it isn't necessary to know how to write computer programs, it's essential to be able to work with computers. Almost all doctors' offices and hospitals now use some type of computer system. Most likely, you'll be expected to learn the software system that's being used to run the office or department. Don't let this concern you! Learning the specific software system used in a department or office is generally part of on-the-job training.

Professionalism. No matter how good your other skills, you won't be a successful health information management professional without being able to deal with others in a respectful and professional manner. You've chosen a profession that's service-oriented. You must learn how to deal with people calmly and professionally—no matter what situation arises. Most of these skills you've acquired already; many of them you probably learned as a child. These skills are still important today!

Listening effectively. Listening effectively is more than just hearing the words that the person is saying. You must listen and understand what others are trying to say. It's also important to not think of your response while people are speaking to you. If you do this, you may miss some important information that they're conveying to you. Instead, listen first and then formulate your response once the other person is finished speaking. If you understand what someone is saying, you may want to nod your head so that they know you're listening effectively. If you don't understand something that a person is saying to you, try not to get upset. Instead, try to question the statements that you don't understand. These measures will prove that you're listening effectively and will make communication easier.

Communicating effectively. Verbal and written communication skills are both important. When communicating, you must be sure to choose words that best describe what you're trying to say. In addition, communication is more than speaking or writing words. Often, you communicate with your tone of voice (verbal cues) or your body language (nonverbal cues). When we're upset, our words may be nice and professional, but our tone of voice and the way we're sitting or

standing may let others know that we're upset. For example, if you're upset, your tone of voice may be at a higher pitch, you may sigh, or you may use shorter words and sentences. Also, if you're upset or angry, your body language may reflect this. Crossing your arms or tapping your foot both send nonverbal cues that you're upset. These are all communication skills that you need to be aware of in the business world. It takes practice for all of us to improve them. It's good to practice your verbal and nonverbal communication skills at home with your family and friends. This will help you become accustomed to them for the business world and will also improve communications in your personal life.

Telephone skills. Good telephone skills are important in business. You may be spending a great deal of time talking on the telephone with different people—physicians, managers, patients, insurance companies, and others. Having good telephone skills will let others know that they're dealing with a professional person. Good telephone skills include speaking clearly and answering the telephone professionally (generally with the name of the office or department and your name). If you answer the telephone with a smile on your face, this will be reflected in your tone of voice. It really works! Try it the next time you answer your home telephone. Also, never answer the telephone with gum, candy, or food in your mouth.

Approachability. It's important for people to feel like they can approach you with their problems or ask a question. If you're often in a bad mood, don't like to be bothered, or answer people with snappy or short responses, it will be hard for people to approach you. It's important to maintain a pleasant demeanor and not be intimidating to others. This will help others understand that they can approach you and ask you questions.

Patience and helpfulness. Being patient means that you must deal with difficult or stressful situations without complaining about them. Remember, you've chosen a service-related career. This means that you'll have many interruptions to help people throughout your day. If you're not a patient person, this may be a difficult career for you. However, it won't be impossible. There are measures you can take to help you become more patient. Shut your office door or go to a

private area, close your eyes, and take deep breaths if you feel that you're losing your patience. Excuse yourself and take a break from a meeting or a conversation. If you're in the middle of something and a co-worker or health care worker interrupts you, ask if you can get back to them. If it's an emergency, they'll tell you so. In that case, becoming impatient won't help the situation. You can also practice these measures in your personal life to help you become a more patient person. Try to remember that you're dealing with sensitive medical information. In some cases, this means dealing with patients, family members, and health care workers who are upset or stressed about a medical situation. Your patience will help ease their stress.

Hectic and stressful situations often arise in the medical field. A good rule of thumb is to treat everyone as you would like to be treated. Learning early how to help others without being emotional will help you become successful. Table 5 summarizes the necessary skills for health information management technicians.

Table 5
IMPORTANT SKILLS FOR HEALTH INFORMATION MANAGEMENT TECHNICIANS
<ul style="list-style-type: none">• Detail-oriented• Organized• Good understanding of medical terminology• Computer literate• Effective communicator• Patient and helpful• Reliable• Effective listener• Good telephone skills• Approachable

Professionalism

Professionalism refers to qualities and character traits that together make up how you act and are perceived on your job. As a health information management technician, you must be professional to perform your job to the best of your ability. As a professional, you should act responsibly and take responsibility for your own actions. In addition, you must be able to make decisions that are within the ethical and legal boundaries of the health care field. A professional always respects the rights and privacy of patients and their information.

Part of being professional is projecting a professional appearance. Have you ever heard the old saying, “To play the part you must dress the part”? To look like a professional, you must dress professionally. Depending on your work setting, this may mean a suit. In some settings, it may mean neat and attractive everyday or casual clothes. For other work settings, it may mean a specific uniform or scrubs and a laboratory coat. Whatever the dress code at your workplace, you need to remember the following about professional appearance:

- Make sure that clothing is clean and neat. Clothes should be clean with no physical signs of wear, such as holes or faded colors. Shoes should be clean or polished.
- Avoid extreme hairstyles. Hair should be clean and neatly groomed.
- Hands and nails should be clean. Keep your hands clean by frequent washings. Remember, you’re working in a medical environment where microorganisms spread easily! According to the Centers for Disease Control (CDC), hand washing is the single most important factor in preventing the spread of germs. The CDC reports that each year nearly 1.7 million patients in the United States get infections in hospitals, and approximately 99,000 of these patients die as a result of their infection. In addition, nails should be clean and trimmed.

- Avoid exaggerated or heavy makeup and nail polish. Makeup should be simple and enhance your natural features. Nail polish should be neutral.
- Keep fragrances light (if wearing any at all). Remember, in some work settings you'll be dealing with patients who may be sensitive to certain scents due to their illnesses.
- Wear only minimal jewelry pieces. Too much jewelry or large, unusual, and gaudy pieces can be distracting or make the rest of your appearance look unprofessional.

Professionalism is also measured by job performance. To use your skills effectively, you must be able to perform your job—most often under little or no supervision. You must also be dependable, efficient, accurate, thorough, and flexible.

Good health information management technicians easily achieve professionalism in their daily job performances. The qualities listed in this session are essential for success as a health information management professional.

Summary

Several factors will contribute to your success in the health information management field. Achieving your degree and credential(s) will be the first set of important steps toward advancing your career in this industry. Also, remember to continue to improve your skill sets throughout your career. If you're interested in learning more about computers, then enroll in a basic computer class to improve your computer skills. Taking initiative to improve your skill sets will help you advance your career.

It's also important to maintain professionalism at all times. This includes how you look, act, and dress. Combining these factors will help you have a successful career as a health information management technician.

Now, review the material you've studied here. Once you feel you understand the material, complete *Self-Check 6*.



Self-Check 6

1. How were early health information management professionals educated?

2. List five ways to maintain a professional appearance.

Check your answers with those on page 78.

WORKING IN HEALTH INFORMATION MANAGEMENT

The majority of health information management professionals still work in hospitals. According to the American Health Information Management Association, more than 60% of health information management professionals still work in hospital-based settings. However, the role of health information management professionals in nontraditional settings is also growing. Today, these nontraditional settings include technology vendors, government agencies, physicians' offices, long-term care facilities, ambulatory care services, educational institutions, and consulting firms.

Because the field of health information management is ever expanding, the opportunities within this field are growing rapidly. Some roles for health information management technicians include

- Directors, managers, or supervisors
- Data analysts
- Coding specialists
- Cancer registrars
- Correspondence managers (or release-of-information managers)
- Transcriptionists
- Physicians' office managers

Let's discuss these roles in greater detail.

Director, Manager, or Supervisor

Many health information management professionals still serve in the traditional role as directors, managers, or supervisors of health information management departments, usually in hospitals. The main function here is overseeing the daily department operations; supervising the department staff; and ensuring the quality, security, and availability of health information. The size and type of facility will determine your

responsibilities as a director, manager, or supervisor. Managers in large hospitals or facilities oversee many employees. Other managers may choose small hospitals where the health information department has fewer than 10 employees.

Most departmental directors, managers, or supervisors have a two- or four-year degree with the corresponding certification (i.e., RHIA or RHIT). In some cases, directors or managers obtain an advanced degree (e.g., a master's degree in business or health care) and go on to serve in executive management positions such as chief executive officer, chief operating officer, chief financial officer, vice president, or other executive management positions.

Health Data Analyst

As a health information management technician, you may work as a *data analyst* in the information completion area of a hospital's health information management department. The main role of a data analyst is to review the health information records (in paper or electronic format) and ensure that the record has all the information that's needed for the record. When items are missing from the record they're called *deficiencies*. For example, patients who have had surgery are required to have an operative (or surgery) report in their records. These reports explain what was done during surgery and what the findings were. If there's no operative report in this record, then that's considered a deficiency. The deficiencies are then recorded into a deficiency tracking system. The responsibility of the data analyst is to record and track all deficiencies in a patient's health record. When a record has deficiencies, it's categorized with an *incomplete* status. The status remains incomplete until all deficiencies are completed in the record.

You may be wondering why it's important to track data that are missing from a patient's health record. There are two main reasons:

- The health record is considered a legal document and must contain a complete account of the patient's medical stay or visit.
- A patient's medical history (as recorded in the health record) is used for future treatment.

Coding Specialist

One of the strongest job markets for the health information management technician is as a *coding specialist*. Technicians who specialize in coding are called health information coders, medical record coders, coder/abstractors, or coding specialists. Coding specialists review and analyze health information and then code and classify data for reimbursement and research purposes. Technicians assign a numerical code to each diagnosis and procedure based on their knowledge of anatomy, medical terminology, and disease processes.

As a coder, you review a patient's health record, test and laboratory results, operative reports, and any other supporting documentation needed to clarify the patient's diagnoses and procedures. Once you've reviewed and confirmed the appropriate diagnoses and procedures for a patient, you then translate those diagnoses and codes into a number through a numerical classification system. As a coder, you'll most likely use a software program to assign the codes and reimbursement classification system. For hospital inpatients, this classification system is known as *diagnosis-related groups*, or *DRGs*. The DRG determines the amount that the hospital will be reimbursed if the patient is covered by Medicare or other insurance programs that use the DRG system. When a hospital receives payment from a patient's insurance company, it's due to the codes and reimbursement classification that the coding specialist assigned. In other settings, coders use a different coding and classification system, such as those geared toward ambulatory settings or physician office settings. You may have already seen one example of the physician coding system. After the doctor has seen you in his or her office, he or she may hand you a preprinted form to take to the front checkout area. On the form, your doctor probably put a check mark next to your illness. Next to the description of the illness, there are numerical codes. These are the codes that tell the front checkout person in the physician's office the amount to bill the insurance company.

In addition to reimbursement, these numerical codes are also used for research. For example, when you read a statistic like “There were 25,000 children with broken arms seen in emergency rooms across the nation last year,” these statistics come from the clinical codes that have been assigned by a coding specialist.

In some instances, you’ll work closely with physicians, nurses, and other practitioners to ensure adequate and accurate documentation to support your coding. Attention to detail, a thorough understanding of medical terminology, an understanding of insurance and reimbursement systems, and continuing education on numerical codes changes are all important for coding specialists. Additional skills for coding specialists include

- Patience and attention to detail
- Computer skills
- Ability to analyze a large amount of information
- Good problem-solving skills
- Excellent verbal and written communication skills
- Thorough understanding of medicine, including diagnoses and procedures
- Ability to work independently with little supervision
- Excellent listening skills
- Ability to use reference materials
- Ability to work in pressure situations under deadlines

The education and certification for coding specialists vary. Some are degreed professionals with an accreditation such as an RHIA or RHIT. Some have received specialized coding certifications through AHIMA like certified coding assistant (CCA), certified coding specialist (CCS), or certified coding specialist–physician-based (CCS-P). To receive one of these certifications as a coding specialist, you generally need a high school diploma (or equivalent) and relevant experience in the coding area. AHIMA certifications are discussed in more detail within the “Professional Organizations” section.

Coding specialists work in a variety of settings, including hospitals, physicians' offices, and research institutes. Your responsibilities as a coding specialist and the information that you code will depend on the particular setting.

Cancer Registrar

A *cancer registrar* is a professional who ensures that accurate information is maintained about all types of cancers that are treated in health care and other types of facilities. All the information is maintained in a database called a *registry*. This registry information is then used for research, patient follow-up, and improving public health programs for cancer.

Cancer registrars work in many different settings and with many different health care professionals. Cancer registrars work closely with physicians, administrators, researchers, and other health care providers to ensure appropriate reporting standards. Some of the settings for cancer registrars include

- Hospitals
- Central registries
- Consulting firms
- Software companies
- Government agencies
- Pharmaceutical companies
- Insurance companies
- Educational institutes

Much like other industries, there were initially no formal education programs, so cancer registrars were trained mainly on the job. Today, there are formal cancer registry programs at colleges. Most programs include courses such as medical terminology, cancer management, anatomy and physiology, and cancer registry procedures (to name a few). In addition, the National Cancer Registrars Association (NCRA) offers a certification of certified tumor registrar (CTR) that shows your expertise in the area. Although there are formal training programs, you don't have to attend a college program to work

in the cancer registry industry. There are additional training programs that combine on-the-job training, course work, and other eligibility requirements that allow you to work in the industry and become certified. You'll learn more about certification eligibility within the "Professional Organizations" section.

Correspondence Manager

As a health information management technician, part of your education is in the *correspondence management* (i.e., release-of-information area). You may choose to work in or manage the correspondence area of a hospital's health information management department. Correspondence management means that you oversee the function of releasing patients' health information to authorized users. As discussed previously, the health record is a legal document. Great care must be taken to ensure that a patient's information isn't released to someone who doesn't have access to the information. In addition, as a correspondence manager, you may be creating policies and procedures, forms, releases, and other information that relates to releasing a patient's information.

A patient's information is released to various authorized users for a variety of reasons. Sometimes, the patient is being transferred to another hospital or health care facility, so copies of pertinent health information need to be sent with the patient. Other times, you may be working directly with the patient or the patient's family to release information for personal, insurance, or legal purposes.

Correspondence managers or employees work with a variety of people, generally in the hospital setting. These people include

- Physicians
- Nurses
- Administrators
- Lawyers
- Patients

- Patient family members
- Insurance agents
- Personnel at other hospitals
- Nursing home personnel
- Physicians' office administrators
- Researchers

As a correspondence manager, you must be able to work with a variety of personalities, often under deadline or stressful situations. You must also be current on the latest state and government requirements for release of health information.

Medical Transcriptionist

As discussed previously, documentation of medical information has existed for centuries. Originally, physicians wrote all their own medical information in the patient's medical record. It wasn't until the nineteenth century that physicians started using scribes. Scribes were stenographers who would write what the physician was saying as he or she was speaking. As accurate medical information became more important for advancements in medicine and research, these scribes—called *medical stenographers*—started taking the physicians' dictation in shorthand. Dictation is the act of speaking so that it can be transcribed (i.e., written or typed). The use of scribes and dictation freed the physician to concentrate more on research and patient care and less on paperwork.

After the invention of dictation equipment (i.e., recording devices), the stenographer and physician no longer had to work face-to-face. The physician could use the dictation equipment at his or her convenience. The stenographer could then listen to the dictation from the recording device and transcribe the information. This was the beginning of the medical transcriptionist profession.

In the past, medical transcriptionists were called medical transcribers or medical stenographers. Today, we refer to them as *medical transcriptionists (MTs)*. A medical transcriptionist is someone who listens to dictated recordings by physicians

(or other clinicians) and then types the dictation into a report format to be included in the patient's health record. In other words, the physician (or clinician) speaks into a recording device, and the transcriptionist types the physician's words into a report. These reports are then reviewed and signed by the physician or clinician and become part of the legal paperwork of a patient's health record. In some cases, the physician or clinician may return the report to the transcriptionist for corrections or updates. Some transcriptionists also transcribe dictation of manuscripts, correspondence, and other administrative materials.

How does transcription work? Transcriptionists generally listen to the dictation with a special headset (Figure 4). While they're listening to the dictation, they're keying the information into a computer or word-processing program. The transcriptionist must understand enough about the medical field to type the report accurately and at the same time not misinterpret or include their own meanings. As a transcriptionist, you must be able to interpret what the physician or clinician is saying—remember, not everyone has the same accent or pronounces words the same. However, most transcription equipment today also has the ability to slow down or speed up the physician's voice per the needs of the transcriptionist. This will help you better understand exactly what's being said. It's especially helpful with words that you don't recognize or understand. You can then slow the voice down to a very slow speed that helps you determine what the person dictating is saying. Most dictation equipment also has a foot pedal (see Figure 4)—a device that's used to *pause* the recording when necessary. This is especially helpful when you're first learning how to transcribe. Initially, you may not be able to type as quickly as the person is speaking. Pausing the recording will help you catch up until you're ready to start the recording again. Also, in some instances, you'll need to analyze what's being said or do research on a specific term—this means looking up information to ensure that what you're typing is correct.



FIGURE 4—Desktop Transcription System with Foot Pedal

Transcriptionists serve as an important link between the clinical side of medicine and the information side of medicine. Transcriptionists must be able to understand and accurately transcribe the medical information in a clear and understandable format. Good transcriptionists will spot mistakes or inconsistencies in medical reports and discuss them with the clinicians. This allows the person who dictated the information to update or correct the report. Because these reports are filed in the patient's record and used for future treatment, it's important that the information be accurate. The transcriptionist's ability to understand and correctly transcribe the information reduces the chance of patients receiving incorrect or harmful treatment in the future.

The work settings for transcriptionists are diverse. Transcriptionists may work in hospitals, physicians' offices, laboratories, insurance companies, nursing homes, and hospices. A growing trend in the transcription field is working for a company or hospital from the comfort of your own home. Growing technology has made this a flexible and rewarding job for many transcriptionists.

The information transcribed, or typed, will depend on the medical setting where the transcriptionist works (Figure 5). Some transcriptionists will transcribe summaries of the patient's health, known as the *history and physical*, or a summary of the patient's hospital stay, known as the *discharge summary*. Other transcriptionists will transcribe operative (or surgical) reports or other procedure reports. Sometimes, transcriptionists will transcribe physicians' or clinicians' written notes. Most transcriptionists transcribe a variety of these reports throughout their workday. Transcriptionists may also prepare researchers' medical or scientific manuscripts for publication. In addition, many transcriptionists also act as editors, which means that they review the transcribed reports for correct grammar, spelling, and punctuation before they're filed in the patient's health record.

To be a good transcriptionist, you must have good typing skills. Because you must analyze the dictation and simultaneously type the words that are being spoken, you must be able to type quickly and accurately. But don't worry! Proficiency at typing quickly while listening to dictation comes with practice. Although proficiency is an extremely important transcription skill, it isn't the most important skill. The ability to understand and analyze what's being said is the most important skill for a transcriptionist. In medicine, many of the terms sound the same or are pronounced the same way. For example, *ilium* and *ileum* are both pronounced the same way. Ilium is part of the hipbone, whereas ileum is part of the small intestine. You can see how confusing it would be if you typed ileum (small intestine) when the physician was talking about part of the hipbone. As a transcriptionist, you must be able to understand the specialty area or area of the body that relates to the text that you're transcribing so that you know which term to use. Just think about it this way—if you transcribed the name of a medicine incorrectly on a patient's report, it could potentially harm that patient if this information was used for future treatment!

Cardiac Evaluation

Physician Name: Dr. B

Patient Name: Mr. A

Date: 8/3/2013

PRESENTATION: Mr. A is a 58-year-old man referred by his family practitioner Dr. B to our cardiology practice for an emergency consultation. For the past two months, the patient has been experiencing chest tingling on exercise. He describes the tingling as a dull discomfort located in the center of his chest, with some radiation outward within the chest, but no radiation to the jaw, neck, back, or arms. He's also been experiencing some shortness of breath, but has had no nausea, vomiting, or sweating. The tingling occurs when Mr. A is on a treadmill, walks up stairs, or walks from the bus station to his workplace. The discomfort, which generally lasts approximately five minutes, is occurring with increasingly less exercise. While watching TV on the night previous to his consultation, the patient

experienced an episode that lasted approximately 15 minutes. He used a nitroglycerine patch that relieved the discomfort relatively quickly. He has experienced no nocturnal discomfort, and, previous to this one non-exercise-induced episode, hasn't experienced rest discomfort. Before the patient came to the cardiac consultation, he was treated with aspirin and a nitroglycerin patch at his family practitioner's office.

The patient has no history of hypertension, diabetes, congestive heart failure, or prior cardiac difficulty. Formerly, he was able to exercise on the treadmill for approximately 15 minutes. Presently, he experiences discomfort within approximately seven minutes of treadmill exercise.

FAMILY HISTORY: No cardiac problems

HISTORY: No prior surgical procedures or hospitalizations. No smoking or alcohol. Four cups of coffee per week. No allergies. Exercises three days per week. Cholesterol, 230 mg/dL. History of hiatal hernia with some discomfort, for which he has used the nitroglycerin patch. The present discomfort is distinctly different from that of the hiatal hernia. There are no other gastrointestinal or genitourinary symptoms.

PHYSICAL EXAMINATION: Weight, 135 lb and stable. Vital signs: blood pressure, 125/75 mm Hg, right arm; 125/70 mm Hg, left arm. Pulse, 80 bpm and regular. General appearance: well-nourished, thin male. No cyanosis or clubbing. No xanthoma or xantholasma. HEENT*: clear. No arcus. Thyroid not palpable. Chest: clear. Cardiovascular: mean venous pressure normal, with a normal contour. Carotid pulse has a normal upstroke. Left ventricle at mid-clavicular line indiscrete. No other abnormal precordial pulsations. On auscultation, the first heart sound is normal. The second heart sound splits normally. Atrial gallop is present. No ventricular gallop is present. There's no diastolic murmur or click. Abdomen: no organomegaly. Extremities: no edema. Vascular examination: all peripheral pulses are full and equal, and there are no bruits.

Resting electrocardiogram supplied by Dr. B, tracing dated 1/20/2011, shows normal sinus rhythm. No evidence of myocardial infarction or ventricular hypertrophy. Tracing is normal. There's a slight RSR* prime in lead VI.

Tracing dated 7/3/2013 from Dr. B is unchanged from previous tracing and isn't beyond normal limits, with no acute changes.

*RSR = regular sinus rhythm; HEENT = head, eyes, ears, nose, throat.

FIGURE 5—Sample Transcribed Cardiology Evaluation

According to the American Association for Medical Transcription (AAMT), good transcriptionists need a certain basic set of skills. These skills include

- Basic knowledge of medical terminology, anatomy and physiology, disease processes, signs and symptoms, medications, and laboratory values
- English usage, grammar, punctuation, style, and editing
- Ability to use reference materials
- Ability to operate word-processing equipment, dictation and transcription equipment, and other equipment as specified
- Ability to work under pressure with time constraints
- Ability to concentrate
- Excellent listening skills
- Excellent eye, hand, and auditory coordination
- Ability to understand and apply relevant legal concepts

Education and certification for transcriptionists vary. Some transcriptionists have extensive work-related experience. Others have degrees and may even be certified medical transcriptionists. According to the AAMT, there are three distinct levels of professional transcriptionists. Pay and degree of skill vary per level. Whatever the education or skill level, the commonality is the attention to detail and a thorough understanding of medical terminology.

Technology has created great advancements in this industry. Today, we have many different forms of technology and dictating equipment for transcriptionists. Many work settings still use the basic desktop transcriber that was previously described in Figure 4. Advances in technology have also made some transcription material accessible through the Internet. In addition, an even newer system called *speech recognition* automatically transcribes the dictation and prints a draft of the report. Speech recognition will change the way transcriptionists work. Because the report will already be transcribed, the role of the transcriptionist will shift more toward editing, proofreading, and quality control. Don't worry!

These systems don't pose threats to the industry. Instead, it's just another example of the ever-changing medical industry. As a transcriptionist, it will be very important to keep your skills updated so that you can continue to grow in your career as the field changes.

Much hard work and knowledge is involved to become a good transcriptionist, but remember—the benefits are well worth the work. You get to work in one of the fastest-growing and well-respected industries in the nation. You get to work with medical professionals on a daily basis with the important goal of helping to organize and maintain a patient's health information.

Physician Office Managers

A growing area for health information management technicians is working as a *physician office manager*. Years ago, physicians saw patients and ran their medical offices by themselves. Physicians are so busy today that it's extremely rare for them not to have someone help manage the business aspects of their office. As a health information management professional, you're educated in the areas of health care standards, legal issues, release of information, filing, and coding and reimbursement. This knowledge makes you a prime candidate for managing a physician's office.

As a physician's office manager, you may oversee one physician's office or several offices within a physician network, with either one specialty area or a multispecialty area. Specialty offices are those where the physician has received additional training in one specific area of the body or disease process. You may have already heard of some specialty areas because your own doctor may be a specialist. For example, children may see a medical doctor who has a specialty in *pediatrics* or in the diagnosis and treatment of illnesses and diseases of children. Some other examples of specialty areas that you may have heard of include

- *Cardiology*—study of heart conditions
- *Gynecology*—study of the female reproductive system (often combined with a specialty in *obstetrics*, or the study of childbirth and care of mothers before and after birth)

- *Dermatology*—study of skin disorders
- *Gastroenterology*—study of stomach and intestinal disorders
- *Psychiatry*—study of mental illnesses, emotional problems, and chemical dependencies
- *Ophthalmology*—study of eye disorders

There are many more specialty areas, but don't be concerned that you have to learn them all now. These were presented just to give you an example of the specialty areas that you may choose as a job setting. You'll have plenty of time to learn about specialty areas of medicine throughout other study units in this course.

When managing several offices within one network, specialty area, or multispecialty area, you may have to travel to the different offices on different days of the week. In most cases, you'll be based out of one office and will just need to visit the other offices periodically or when problems arise. Many health information management technicians find this a very rewarding way to work because it presents different challenges each day, so the job never seems to get boring.

As a physician's office manager, your main function will be to oversee the day-to-day operations of the office—everything from coding and billing to patient contact, release of patient information, and transcription. You'll also be responsible for ensuring that the office is current on all new standards and procedures and that the office is in compliance with state and governmental regulations. In some cases, you may also be responsible for managing staff to ensure that they're doing their jobs properly.

Nontraditional Health Information Technology Settings

Thanks to the changing field of health care and the advancements of technology, more and more nontraditional opportunities are becoming available to health information

management technicians. Today, you can use your expertise in additional settings outside the hospital. These nontraditional settings include

- Consulting and law firms
- Software vendors
- Correctional facilities
- Substance abuse facilities
- Mental health institutes
- Long-term care facilities
- Home health care
- Hospices
- Managed care organizations
- Ambulatory care centers
- Rehabilitation centers
- Government agencies
- Pharmaceutical companies
- Insurance companies
- Research institutes
- Educational institutes
- Donor management organizations
- Correspondence management companies
- Medical law offices

New and Evolving Roles

With the inception of the HIPAA in 1996, the security of health information has become more important than ever. Part of the HIPAA, the Privacy Rule, protects the privacy of a patient's health information. Health care facilities must now implement privacy and security standards that protect the confidentiality, integrity, and security of individually identifiable health

information in any format. Privacy is an individual's right to be free from intrusion or an individual's right to be left alone. In this case, security refers to the physical safety that prevents alteration, damage, and unauthorized access to a patient's confidential health information.

Because health information management professionals have traditionally been responsible for an organization's health information, they're a perfect choice to help review, implement, and maintain the new privacy regulations. Many facilities are hiring health information management professionals for new positions to help ensure the privacy and security of health information. These new and expanded roles for health information management professionals include

- *Privacy officer*—protects all health information and develops and implements privacy-related policies and procedures
- *Security officer*—helps secure information assets and manage security measures to protect data

These are extremely important roles in furthering the goals of HIPAA. Recognizing the importance of these roles, AHIMA has instituted new credentials to cover this area—Certification in Health Privacy (CHP), Certification in Health Security (CHS), and Certification in Health Care Privacy and Security (CHPS). These credentials are described in more detail in the “Professional Organizations” section.

Summary

As the focus on privacy and security continues to grow and evolve, so will the role of the health information management professional. In addition, technological advances will continue to open more new doors and create more positions for the health information management technician.

Now, review the material you've studied here. Once you feel you understand the material, complete *Self-Check 7*.



Self-Check 7

1. The majority of health information management professionals work in _____.
2. Identify one of the strongest job markets for health information management technicians.

3. Explain what a medical transcriptionist does.

4. List at least five nontraditional work settings for health information management technicians.

Check your answers with those on page 79.
