

Health Informatics (Medical Records)

Health Information Services

Health Information Administrator

Health Information Technician

Medical Transcriptionist

Epidemiologist



Health Information Services

Health information services professionals include **Health Information Administrators** (HIAs), **Health Information Technicians** (HITs), and **Medical Transcriptionists**. HIAs are trained in data collection, interpretation, and analysis. They often serve as managers and participate in staffing, budgetary, and evaluation procedures. HITs ensure the quality of medical records by verifying their completeness, accuracy, and proper entry into the computer systems. They often specialize in coding diagnoses for reimbursement and research. Medical transcriptionists listen to recordings by physicians and other health care professionals dictating a variety of medical reports such as medical room visits, chart reviews, and treatment summaries.

Status

- The health care industry continues to expand and diversify, requiring more health care administrators to handle business operations.
- Managers in all settings will be needed for the improvement of quality and efficiency and the controlling of costs because third-party payors will require higher levels of accountability.
- Computerization of patient records and the accompanying security required by law will also require additional personnel, especially in the transition to electronic health records.
- In 2013, the Department of Health and Human Services (HHS) will move from the International Classification of Diseases (ICD-9-CM) system of disease classification to ICD-10-CM and ICD-10-PCS, a much more complex system that reflects recent advances in disease detection and treatment through biomedical informatics, genetic research, and international data sharing. This change will require more health information technicians to perform the more complex coding needed.
- The BLS reports growth for these occupations through 2018, with state growth mirroring that of the nation.

- Hospitals will continue to employ a large percentage of medical transcriptionists, but job growth there will not be as fast as in other settings. Voice recognition technology will lead to a change in the role of transcriptionists. An increasing demand for standardized records should result in rapid employment growth in physician's offices, especially large group practices.
- Nationally, numbers of health information technician programs and health information administration programs have increased. In Tennessee, the numbers have remained stable.
- The health information management profession (HIM) is concerned primarily with the management of patient records and involves medical, administrative, ethical, and legal requirements in the storage and safekeeping of physical records.
- Job openings for HIAs and HITs are projected to grow faster than the Tennessee average for all professions.
- The population ratios for these fields exceed the national ratio.

Description

The health information management profession (HIM) is concerned primarily with the management of patient records and involves medical, administrative, ethical, and legal requirements in the storage and safekeeping of paper and electronic health records. Patient records include medical histories, the results of physical examinations, reports of x-ray and laboratory tests, diagnosis and treatment plans, physicians' orders and notes, and other sources of information. Although the record is primarily used for the medical care of the patient, the information is also used for legal, financial, research, and other purposes.

The field has undergone significant change in recent years due to stricter reimbursement requirements, an expanded regulatory scope, new technologies, greater demand for information, and cost-containment mandates.

The health information management field consists of baccalaureate-degreed health information administrators (HIA) and associate-degreed health information technicians (HIT). Each level has a national examination to achieve the credentials of registered

health information technician (RHIT) or registered health information administrator (RHIA).

HIAs are trained in data collection, interpretation, and analysis. They often serve as managers and participate in staffing, budgetary, and evaluation procedures. Some of the most common positions for these professionals are system manager, data quality manager, information security officer, college instructor, and consultant. As more facilities integrate patient records into the national health information infrastructure, HIAs will increasingly have roles that contribute to the electronic health record, data vital for patient care.

HITs ensure the quality of medical records by verifying their completeness, accuracy, and proper entry into computer systems. They often specialize in coding diagnoses for reimbursement and research. Common position titles for these professionals are health data analyst, insurance claims analyst, records technician specialist, clinical coding specialist, and patient information coordinator.

A few programs also offer master's degrees in health information management and health informatics. There is an effort in the profession to move toward a greater number of master's-prepared professionals.

In addition to administrators and technicians, medical transcriptionists also play an important role in health information management. Medical transcriptionists listen to recordings by physicians and other health care professionals dictating a variety of medical reports such as medical room visits, chart reviews, and treatment summaries. These reports eventually become part of patient records. According to the BLS, employers prefer medical transcriptionists who have completed a vocational school or community college program. As voice recognition technology improves, the transcriptionist will be moving toward a role resembling that of an editor to ensure the accuracy of the document produced.

National Supply and Demand

While hospitals are still one of the primary employers of health information professionals, HMOs, ambulatory care facilities, nursing homes, group practices, insurance agencies, accounting companies, and law firms also employ these personnel. Organizations not

involved in direct care, such as insurance companies and health insurance agencies, employ medical records specialists to help set policy, analyze data, and evaluate provider performance. Other employers, such as contract agencies and consulting firms, supply medical records personnel to these institutions and organizations, usually on a temporary and intermittent basis. Vendors are employing health information administrators in the move toward electronic health records.

Health information administrators (included in the medical and health services managers/administrators category by the Bureau of Labor Statistics) held about 262,000 jobs in 2008. Of these, 37 percent work in hospitals. About 22 percent were in nursing and personal care facilities or physician offices and clinics. The remainder worked in home health care, federal government health care facilities, and outpatient care centers or for insurance companies, vendors, or long-term care facilities. Recent federal initiatives to help facilities implement electronic health records will require the HIA competencies in privacy and security and health record content as well as health information systems.

The BLS also projects the need for 45,400 new medical and health services managers, the category that includes health information administrator with bachelor's or higher degrees, between 2008 and 2018. That number represents a 16 percent growth rate (1.6 annually). Total job openings due to growth and replacement are 99,400.

Medical records and health information technicians held about 172,500 jobs in 2008 and projects 207,600 in 2018. About four out of ten jobs were in hospitals. The rest were mostly in nursing homes, medical group practices, clinics, and home health agencies. The BLS projects a 20.8 percent growth for new medical record and health information technicians through 2018 (2.0 percent annually). This translates to a need for 70,000 health information technicians to fill new jobs and replace workers who leave the field, making this one of the fastest growing health occupations.

Medical transcriptionists held about 105,200 jobs in 2008. About 41 percent worked in hospitals and another 29 percent in physician offices and clinics. Hospitals will continue to employ a large percentage of medical transcriptionists, but job growth there will not

be as fast as in other settings. An increasing demand for standardized records should result in rapid employment growth in physician's offices, especially large group practices. The BLS reports that the demand for medical transcriptionists is expected to grow as well. Projected employment for 2018 is expected to be 116,900, an 11.1 percent increase during the 2008–2018 period (1.1 percent annually). Those who earn an associate's degree or an American Association for Medical Transcriptionist certification should have favorable job prospects.

The BLS data represent an estimated need of 7,300 HIA and HIT graduates per year. According to the Commission on Accreditation of Health Informatics and Information Management Education (CAHIIM), HIA and HIT programs in 2008 graduated about 3,038 HIM professionals per year, 40 percent of the number needed.

In 2009, there were 55 CAHIIM-accredited health information administration programs and 213 health information technician programs.

TABLE 4.1

U.S. Accredited Health Information Administrator (HIA) and Health Information Technician (HIT) Programs

Year	Health Information Administrators	Health Information Technicians
1990	55	108
1995	53	142
2002	49	175
2003	47	186
2009	55	213

Source: *Health Professions Education Data Book, 2003–2004*, www.caahep.org, www.cahiim.org.

The number of CAAHEP-accredited programs in health information administration went down from 1990 but has increased back to 55 in 2009, the 1990 level. From 1990 to 2009, the number of CAHIIM-accredited HIT programs increased from 108 to 213.

State Supply and Demand

The Tennessee Department of Employment Security reported that the employment base for health information technicians in 2008 was 3,781. That number is expected to increase to 4,280 in 2016, with an annual growth rate of 2 percent. In 2006, the supply or number of graduates for the health information technology area was 84 and the average annual openings were 170, so there is an unmet need of approximately 86. The Tennessee Department of Employment Security does not collect data on HIAs. The employment base for medical and health services managers, the category that includes health information administrators, is 5,330 with an expected increase to 6,290 by 2016 for an average annual increase of 1.7 percent. Tennessee graduated 21 in 2002 and 30 in 2006 from its two HIA programs.

In Tennessee, there are two baccalaureate programs in HIA and five programs in health information technology. The administration programs are located at Tennessee State University and the University of Tennessee Health Science Center at Memphis. The health information technician programs award both a certificate and an A.A.S. degree and are located at Chattanooga State Technical Community College, Dyersburg State Community College, Walters State Community College, Volunteer State Community College, and Roane State Community College. These programs last between 21 and 24 months. There were 55 graduates in HIT programs in 2002 and 84 in 2006.

In 2008, the estimated employment of medical transcriptionists in Tennessee was 2,326. The projected employment for 2016 is 2,420, representing an average annual percent increase of 1.0 percent and 55 average annual openings. Projected 10-year additional openings for medical transcriptionists in Tennessee are 270. Because this field does not require certification or licensure, vacancies are not easily identified.

For medical transcriptionists, the outlook in Tennessee is a competitive market. Occupations in this field are not expected to be in demand with employers, though the growth rate is positive. There were more training completers in a recent year than job openings expected annually.

For health information administrators and technicians, the outlook is excellent, with more job openings expected annually than training completers in a recent year.

TABLE 4.2

Tennessee Graduates in Health Information Management

Year	HIA	HIT	Medical Transcriptionist
1988	23	25	11
1989	26	26	8
1990	24	20	4
1991	20	33	12
1992	28	18	14
1998	29	44	—
2002	11	63	37
2003	21	55	—
2008	30	84	

Source: THEC, SIS, 1992, 2003; *Health Professions Education Directory*, 1999; *Health Professions Education Data Book*, 2003–2004, 2007–2008

Summary

In general, the reports discussed in this section indicate an increased need for health information technicians as well as health information administrators. The number of assistant-level HIT graduates continues to increase while HIA graduate numbers remain relatively unchanged.

With emphasis on health care reform and its reliance on information technology, the national demand is projected to increase rapidly, and regional reports appear to follow national trends. There should also be an increased need for coders and/or health information technicians and medical transcriptionists. In Tennessee, the outlook is excellent for health information administrators and technicians, though for medical transcriptionists the outlook is a more competitive market. Local demands may change within a short period of time and may not always reflect state workforce data.

Epidemiologist

Epidemiologists investigate and describe the determinants of disease, disability, and other health outcomes and develop the means for prevention and control. Epidemiologists may study many different diseases, such as tuberculosis, influenza, or cholera, often focusing on epidemics. Epidemiologists may work in research or clinical practice.

Status

- The BLS reports expected growth in employment for epidemiologists at a rate of 13.5 percent through 2018 (1.3 percent annually). The state growth rate for this occupation is similar to that of the nation.
- A heightened awareness of bioterrorism and rare but infectious diseases such as West Nile Virus or severe acute respiratory syndrome (SARS) should spur demand for epidemiologists. As hospitals enhance their infection control programs, many will seek to boost the quality and quantity of their staff.
- Epidemiologists are less likely to lose their jobs during recessions than are those in many other occupations because they are employed for long-term research projects.
- The number of epidemiologists employed in Tennessee in 2006 was 60. It is projected that in 2016 there will be 70. This represents an annual average growth rate of 1.3 percent, and the field is considered competitive.
- The long-term growth rate for epidemiologists in Tennessee is predicted to be stable. It is estimated that Tennessee will have an average of about five openings per year from 2006 to 2016.
- The population ratio for epidemiologists in Tennessee is slightly less than that of the nation.

Description

Some medical scientists specialize in epidemiology. This branch of medical science investigates and describes the determinants of disease, disability, and other health outcomes and develops the means for prevention and control. Epidemiologists may study many different diseases such as tuberculosis, influenza, or cholera, often focusing on epidemics.

Epidemiologists can be separated into two groups—research and clinical. Research epidemiologists conduct research in an effort to eradicate or control infectious diseases that affect the entire body, such as AIDS or typhus. Others may focus only on localized infections of the brain, lungs, or digestive tract, for example.

Clinical epidemiologists work primarily in consulting roles at hospitals, informing the medical staff of infectious outbreaks and providing containment solutions. These epidemiologists sometimes are referred to as infection control professionals, and some of them are also physicians. Epidemiologists who are not physicians often collaborate with physicians to find ways to contain diseases and outbreaks. In addition to their traditional duties of studying and controlling diseases, clinical epidemiologists also may be required to develop standards and guidelines for the treatment and control of communicable diseases.

Educational Preparation

A Ph.D. in a biological science is the minimum education required for most prospective medical scientists, except epidemiologists. Epidemiologists typically need at least a master's degree in public health, but some work requires a Ph.D. or medical degree.

There are no formal degree programs in epidemiology in Tennessee. Several universities offer a concentration in epidemiology for undergraduate programs, usually consisting of 43 semester hours of public health and epidemiology courses. Three universities offer a postbaccalaureate certificate in epidemiology: East Tennessee State University, the University of Tennessee at Knoxville, and the University of Tennessee at Memphis. The certification program requires obtaining 15 total credit hours beyond a bachelor's degree. Study includes courses in public health and epidemiology. East Tennessee State University offers a doctorate in public health with a concentration in epidemiology. Completion of the Dr.P.H. requires a minimum of 58 semester hours beyond the master's degree. Epidemiologists with both a Ph.D. and M.D. are likely to find very good opportunities for work.

National Supply and Demand

Epidemiologists account for about five percent of the total of medical scientists in 2008—or a total of 4,800 jobs—with projections for 2018 of 5,500 jobs. Among epidemiologists, 57 percent were employed in government; 12 percent were employed in hospitals; 11 percent were employed in colleges and universities; and 9 percent were employed in scientific research and development services. Employment as an epidemiologist is expected to increase 13.5 percent over the 2008–2018 decade (1.4 percent annually), faster than the average. An increasing focus on monitoring patients at hospitals and health care centers to ensure positive patient outcomes will contribute to job growth for epidemiologists. In addition, a heightened awareness of bioterrorism and rare but infectious diseases such as West Nile Virus or severe acute respiratory syndrome (SARS) should spur demand for these workers. As hospitals enhance their infection control programs, many will seek to boost the quality and quantity of their staff. Epidemiologists are less likely to lose their jobs during recessions than are those in many other occupations because they are employed for long-term research projects. As funding for research becomes more difficult to obtain, those with both a biological and professional medical background will have a distinct advantage. Opportunities in epidemiology should be highly competitive because the number of available positions will continue to be limited.

State Supply and Demand

The number of epidemiologists employed in Tennessee in 2008 was 64. It is projected that in 2016 there will be 70. This represents an annual average growth rate of 1.3 percent or overall growth of 14.1 percent. According to the state economic outlook, this field in Tennessee is a competitive market. Occupations in epidemiology report more training completers than job openings expected annually. Local demands may change within a short period of time and may not always reflect state workforce data. The long-term growth rate for epidemiologists in Tennessee is predicted to be stable. It is estimated that Tennessee will have an average of about five openings per year from 2006 to 2016.

Summary

An increasing focus on monitoring patients at hospitals and health care centers to ensure positive patient outcomes will contribute to job growth for epidemiologists, as well as a heightened awareness of bioterrorism and infectious diseases such as West Nile Virus or severe acute respiratory syndrome (SARS). Growth is projected for the national and state level, though it is, according to the state economic outlook, a competitive market in Tennessee for this cluster. Occupations in this field report more training completers than job openings expected annually. Local demands may change within a short period of time and may not always reflect state workforce data. Epidemiologists may be employed by hospitals, colleges and universities, or scientific research and development services.