

Health Care & Health Sciences Career Pathways through MoHealthWINS



MO
HEALTH
WINS.org



THERAPEUTIC SERVICES



SUPPORT SERVICES



DIAGNOSTIC SERVICES



INFORMATICS

Health Care Careers



Health care is the largest employing industry in Missouri. The health care industry has over 12,000 employers that provide jobs to 350,000 people across the state. The health care sector is also projected to grow faster than most industries, ensuring good career prospects well into the future.

Why should you consider a career in the health care industry?

The health care industry employs over 200 different occupations, providing a variety of work opportunities for every interest. From jobs that directly care for patients to careers that keep the whole system going, important jobs are waiting to be filled. Most health care jobs can be divided into 4 career pathways that often have similar skills and offer opportunities for advancement:

Therapeutic Services -

Employees care for ill or injured patients and treat and manage patients' health care problems; includes jobs such as nurses and pharmacy techs.



THERAPEUTIC SERVICES

Diagnostic Services -

Employees identify and diagnose patient health problems using testing, procedures, and technology; includes jobs such as Medical Lab Technician and Phlebotomist.



DIAGNOSTIC SERVICES

Support Services -

Includes jobs such as Environmental Services Aides and Maintenance Laborers; employees maintain the physical facilities, machines, and technology of health care institutions.



SUPPORT SERVICES

Health Informatics -

Includes jobs such as Medical Billers and Coders, and Data analysts. Employees may store, retrieve, and manage information related to patient care, or design computer hardware, software, and networks.



INFORMATICS

What You Need to Know

Every job requires a different set of technical and academic skills, and often the amount of pay you make is related to how much training you receive. This brochure will outline the major skills and credentials you need to be successful in a selected career and how much pay you can expect.

One thing that is common across all jobs and important to career success is your mastery of the basic skills of communication, teamwork, problem-solving, and work ethics. Employers want a well-rounded worker who can speak and write effectively, work well with others, and solve problems with a positive attitude. Seek out ways to build your skills in these basic areas and you will reap the rewards no matter what career path you choose.

MoHealthWINS programs also come with powerful certifications like the National Career Readiness Certificate to boost employability and job competitiveness. The NCRC verifies to potential employers the applicant's skill levels in Applied Math, Locating Information and Reading for Information. These three skills are highly desirable to employers when considering candidates for new hires and for promotions.



What is MoHealthWINS?



The \$20 million MoHealthWINS program will train more than 3,200 Missourians for careers in growing healthcare occupations, while developing innovative solutions to current and future workforce needs in the health services/

sciences industry. Administered through the Missouri Community College Association, this program is made possible by a federal TAACCCT grant, plus vital support from our employer partners and college/workforce partners. MoHealthWINS offers:

- Very low-cost training in a high-demand, high growth industry from one of Missouri's premier training institutions
- Personal assistance along the way from trained, professional Career Coaches and other helpful college staff
- Powerful certifications like the National Career Readiness Certificate to boost employability and job competitiveness

Therapeutic Services



These employees work closely with patients and collaborate with nursing and medical team supervisors. Therapeutic activities may include provision of basic care, assistance with self care, medication

preparation or administration, and patient teaching.

Hot jobs include: Certified Medication Technician, Patient Care Technician, Nursing Aide, Certified Nursing Assistant, Certified Insulin Administration

Certified Nursing Assistant

Nursing aides, sometimes called nursing attendants or nursing assistants, provide basic care and help with basic living activities. They typically clean and bathe patients, serve meals, help patients use the toilet and dress, transfer patients between beds and wheelchairs, and measure patient's vital signs. Some nursing aides and attendants may also dispense medication.

Nursing aides need to be skilled in patient care and assistance and measuring vital signs. Employers also frequently request credentials such as First Aid certification, medication aid certification, and basic cardiac life support certification.

Nursing aides work as part of a healthcare team under the supervision of licensed practical nurses or registered nurses.

Missouri Entry Annual Wage..... \$17,301

Missouri Average Annual Wage \$22,278

Missouri Experienced Annual Wage.....\$24,767

Pharmacy Technician

Pharmacy technicians help licensed pharmacists dispense prescription medication. They work in retail pharmacies and hospitals.

Pharmacy technicians typically collect information needed to fill a prescription from customers or health professionals, count tablets, measure medications, or compound and mix medication, package prescriptions and do routine pharmacy tasks such as answering phones or collecting payment for prescriptions.

Pharmacy technicians working in hospitals and other medical facilities prepare a greater variety of medications, such as intravenous medications. They may make rounds in the hospital, giving medications to patients.

Pharmacy technicians work under the supervision of pharmacists and must be skilled in pharmacist assistance, order entry, and IV Admixture. Employers also frequently request a pharmacy technician certification and basic cardiac life support certification.

“My favorite part of my job is the people I work with and the organization. We are here to serve our patients. It's challenging and keeps me busy daily.” - Pharmacy Technician

Missouri Entry Annual Wage.....	\$20,890
Missouri Average Annual Wage	\$27,331
Missouri Experienced Annual Wage	\$30,552

Licensed Practical Nurse

Licensed practical nurses provide basic medical care. They work under the direction of registered nurses and doctors.

Duties of LPNs vary, depending on their work setting. For example, they may teach family members how to care for a relative, help to deliver and care for infants, collect samples for testing and do routine laboratory tests, or feed patients who need help eating. They may also give immunizations or injections. Experienced licensed practical nurses may oversee and direct other LPNs and unlicensed medical staff.

LPNs must be skilled in patient care, health screening, and immunizations. Employers also frequently request they be LPN certificated, and have first aid and IV certification.

“My favorite part of my job is patient and family education and support.” -Licensed Practical Nurse

Missouri Entry Annual Wage.....	\$30,461
Missouri Average Annual Wage	\$37,578
Missouri Experienced Annual Wage	\$41,137



Registered Nurse

Registered nurses (RNs) provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members.

Registered nurses typically record patients medical histories and symptoms, give patients medicine and treatments, operate and monitor medical equipment, consult with doctors and other healthcare professionals, help perform diagnostic tests, and teach patients and their families how to manage their illnesses or injuries. Some nurses have jobs in which they do not work directly with patients, but they must still have an active registered nurse license. For example, they may work as nurse educators, healthcare consultants, public policy advisors, researchers, hospital administrators, salespeople for pharmaceutical and medical supply companies, or as medical writers and editors. Some registered nurses also oversee licensed practical nurses, nursing aides, and home care aides.

Registered nurses need to be skilled in patient care, treatment planning, and patient and family education. Employers also frequently request they be RN certified, and have first aide and basic or advanced cardiac life support certification.

“ I enjoy working with the nurses on my floor and developing positive working relationships with my co-workers. Caring for children requires teamwork and I feel privileged to be part of our team. I enjoy helping co-workers when they are overwhelmed with either a very sick patient or just need an extra pair of hands to hold a child. ” - Registered Nurse

Missouri Entry Annual Wage.....	\$41,305
Missouri Average Annual Wage	\$60,395
Missouri Experienced Annual Wage	\$69,941



Diagnostic Services



These employees work closely with patients and collaborate with medical team supervisors to treat and prevent disease and manage patient health problems. Diagnostic technology may include microscopic specimen analysis, hearing tests, and CAT scans.



Hearing Instrument Specialist

Hearing instrument specialists help select and fit hearing aids for customers, administer and interpret hearing test, and assess hearing instrument efficacy.

Hearing instrument specialists typically perform basic hearing screenings, train client to use hearing aids, and maintain and repair hearing aids. They may also diagnose and treat hearing disabilities under the direction of an audiologist, and assist audiologists in performing aural procedures.

A hearing instrument specialists needs to be skilled in audiology and hearing screening, including newborn hearing screening.

Missouri Entry Annual Wage.....	\$25,535
Missouri Average Annual Wage	\$38,664
Missouri Experienced Annual Wage	\$45,228

Phlebotomist

A Phlebotomist draws blood for tests, transfusions, donations, or research.

A Phlebotomist's typical job duties include drawing blood, disposing of contaminated sharps and biohazard fluids, entering patient and specimen information into computers, and organizing and cleaning blood drawing trays. They may also transport specimens from collection sites to laboratories.

Phlebotomists need to be skilled in blood and specimen collection and venipuncture. Phlebotomists have a lot of contact with patients so they should enjoy working with people. Phlebotomists typically have to have a phlebotomy certification. Employers may also request first aid certification, basic cardiac life support certification, or a commercial driver's license.

“ My favorite part of my job is helping patients get their labs drawn so they can get their diagnosis. ” -Phlebotomist

Missouri Entry Annual Wage.....\$19,843

Missouri Average Annual Wage\$28,898

Missouri Experienced Annual Wage.....\$33,426

Medical Laboratory Technician

Medical laboratory technicians collect samples and perform the tests to analyze body fluids, tissue, and other substances.

Medical laboratory technicians typically conduct chemical analysis of body fluids to detect abnormalities and diseases, set up and clean medical lab equipment, collect blood or tissue samples from patients, and analyze and record test data. Medical laboratory technicians usually work under the supervision of medical laboratory technologists or laboratory managers.

Medical laboratory technicians need to be skilled in phlebotomy, pathology, and laboratory testing. Employers may also request they have a medical laboratory technician certification, phlebotomy certification, or basic cardiac life support certification.

“ The favorite part of my job is knowing that I contribute to the care of our patients ” -Medical Lab Technician

“ My favorite part of my job is learning about new diseases and medical conditions associated with laboratory results. ” -Medical Lab Technician

Missouri Entry Annual Wage.....\$23,898

Missouri Average Annual Wage\$35,773

Missouri Experienced Annual Wage..... \$41,710

Radiologic Technologists and Technicians

Radiologic technologists and technicians perform diagnostic imaging examinations, such as x rays, on patients.

Radiologic technologists and technicians typically prepare patients for procedures, operate computerized equipment to take images, adjust and maintain imaging equipment, and work with radiologists in reading images to determining whether other images need to be taken.

Radiologic technologists specialize in x-ray, computed tomography (CT), and magnetic

resonance imaging (MRI) equipment. They may be called CT technicians or MRI technicians, depending on the equipment they work with.

Radiologic technologists and technicians need to be skilled in radiologic technology. As they spend a lot of time working with patients they should also be skilled in patient care and enjoy working around people. Employers usually request they have an American Registry of Radiologic Technologist certification, and may also request they be certified in first aid or basic cardiac life support.

“The most rewarding part of my job is helping patients understand what is happening inside their bodies and supplying doctors with the information they need to provide the appropriate care.” -Radiologic Technician

Missouri Entry Annual Wage.....\$36,902

Missouri Average Annual Wage\$50,222

Missouri Experienced Annual Wage\$56,884



Support Services



Employees in support services occupations perform activities to maintain the physical facilities, machines, and technology of health care institutions to ensure efficient and optimal operation and to provide a safe and hygienic environment for staff and patients.

Environmental Services Aide

Environmental services aides may work as Janitors or Housekeepers.

Janitors and housekeepers keep buildings clean, orderly, and in good condition and perform general cleaning tasks, including making beds and vacuuming halls. They typically clean floors, bathroom, and rooms, and janitors may make minor repairs to buildings, such as changing light bulbs. Housekeepers who work in hotels, hospitals, and other commercial establishments are responsible for cleaning and maintaining the premises. They may also share other duties. For example, in hospitals, workers may have to wash bed frames and disinfect and sanitize equipment with germicides.

Missouri Entry Annual Wage.....	\$17,095
Missouri Average Annual Wage	\$21,678
Missouri Experienced Annual Wage.....	\$23,970

Sterile Processing Technician

Sterile processing technicians prepare, sterilize, install, or clean laboratory or healthcare equipment. They may perform routine laboratory tasks and operate or inspect equipment. Sterile processing technicians may also be called medical equipment preparers or central services processing technicians. Medical equipment prepares typically clean instruments to prepare them for sterilization and organize and assemble sterile supplies, such as stocking crash carts or other medical supplies. They may also purge waste from medical equipment.

Sterile processing technicians must be skilled in equipment cleaning. Employers may also request they be a Certified Registered Central Service Technician.

Missouri Entry Annual Wage.....	\$23,334
Missouri Average Annual Wage	\$30,196
Missouri Experienced Annual Wage.....	\$33,627

Biomedical Technician

Biomedical technicians inspect, repair, calibrate and design medical equipment that grows more advanced and vital all the time. Biomedical Technicians spend much of their time working hands-on with machines. To adjust and repair equipment, they use both tools and computer applications. Many facilities consult biomedical technicians when choosing new machines and planning for the future. These technicians train medical professionals to use equipment safely and effectively.

Biomedical technicians should have knowledge of machines and technology and be skilled in troubleshooting and repairs. Biomedical technicians should also have good interpersonal skills in order to work effectively with medical professionals, hospital staff, administrators and patients.

Missouri Entry Annual Wage.....	\$29,796
Missouri Average Annual Wage	\$44,855
Missouri Experienced Annual Wage	\$52,386

Maintenance Laborer

General maintenance and repair workers maintain and repair machines, mechanical equipment, and buildings. They work on plumbing, electrical, and air-conditioning and heating systems. They typically maintain and repair equipment and buildings and do general cleaning and upkeep of buildings and properties.

General maintenance and repair workers are hired for maintenance and repair tasks that are not complex enough to need the specialized training of a licensed tradesperson, such as a plumber or electrician. They are also responsible for recognizing when a job is above their skill level and needs the skills of a tradesperson,



such as an electrician or plumber. Workers may fix plaster or drywall. They may fix or paint roofs, windows, doors, floors, woodwork, and other parts of buildings. They also maintain and repair specialized equipment and machinery in cafeterias, laundries, hospitals, stores, offices, and factories.

Maintenance workers need to have general maintenance, repair, carpentry, or HVAC skills. Some employers may also request they have a Commercial Driver's License.

“ I like trouble shooting any kind of problems. I like to do multiple things, I seldom get bored. ” -Maintenance Laborer

Missouri Entry Annual Wage.....	\$27,536
Missouri Average Annual Wage	\$44,265
Missouri Experienced Annual Wage.....	\$52,075

Medical Equipment Repair Technician

Medical equipment repairers install, maintain, and repair patient care equipment. They typically test and repair equipment, and perform and keep records of maintenance and repairs.

Medical equipment repairers repair a wide variety of electronic, electromechanical, and hydraulic equipment used in hospitals and health practitioners' offices. They may work on patient monitors, defibrillators, medical imaging equipment (X rays, CAT scanners, and ultrasound equipment), voice-controlled operating tables, and electric wheelchairs, as well as on sophisticated medical equipment that dentists and eye doctors use.

If a machine has problems or is not functioning to its potential, the repairer may have to adjust the mechanical or hydraulic parts, or adjust the software to bring electronic equipment back into calibration. Many of the pieces of equipment that they maintain and repair use specialized software, and repairers use that software to adjust the machines.

In a hospital setting, medical equipment repairers must be comfortable working around patients because repairs occasionally must take place while equipment is being used. Medical Equipment Repairers must be skilled in repair and equipment maintenance and cleaning. Employers may also request they certified as a biomedical equipment technician or a biomedical electronics technician.

Missouri Entry Annual Wage.....	\$26,673
Missouri Average Annual Wage	\$41,538
Missouri Experienced Annual Wage.....	\$48,701

Informatics



Employees in informatics occupations store, retrieve and manage information related to patient care, treatment and finances and maintain computer hardware, software and networks that support information management.

Medical Biller and Coder



Medical billers and coders use various classification systems to code and categorize patient information for insurance purposes, databases and registries, and to maintain patients' medical and treatment histories.

Medical billers and coders typically review patient records for accuracy, review claims for errors, use classification software to assign clinical codes for reimbursement and data analysis, and electronically record data. Medical billers and coders may work as a liaison between the health clinician and billing offices. Although medical billers and coders do not provide direct patient care, they work regularly with physicians and other healthcare professionals. They meet with these workers to clarify diagnoses or to get additional information to make sure that records are complete and accurate.

Medical billers and coders must be skilled in billing, health information technology, and ICD-9 CM Coding. Employers may request they be a registered health information technician or administrator, or that they have a medical billing and coding certification.

“ My favorite part of my job is the variety of errors/issues that have to be researched which leads to learning something new almost every day. ” -

Medical Biller and Coder

Missouri Entry Annual Wage.....\$23,236

Missouri Average Annual Wage\$33,030

Missouri Experienced Annual Wage.....\$37,926

Health Information Management Technician

Health information management technicians use various classification systems to code and categorize medical records for insurance billing purposes, and for databases and registries. They help maintain quality control in medical records. Health information management technicians typically scan documents, review records for completeness, organize and maintain data for clinical databases and registries, and reroute incomplete medical records to health practitioners for completion.

Health information management technicians help insure the quality control and completeness of medical records. Although Health information management technicians do not provide direct patient care, they work regularly with physicians and other healthcare professionals. Health information management technicians have to be able to understand the requirements of a complete medical record, and have to be able to work with physicians and other medical personnel to walk them through the completion of medical records. They have to be skilled in ICD-9 CM coding, CPT coding, and health information technology. Employers may request they be a registered health information technician or administrator, or that they have a medical billing and coding certification.

“ When I get a problem and I am able to resolve it that is a good day! ” -

Health Information Management Technician

Missouri Entry Annual Wage.....\$23,453

Missouri Average Annual Wage\$33,408

Missouri Experienced Annual Wage.....\$38,386

Computer Support Specialist

Computer support specialists provide help and advice to people and organizations using computer software or equipment. Computer Support Specialists may support information technology (IT) employees within their organization, or they may assist non-IT users who are having computer problems.

Computer support specialists typically test and evaluate network systems, perform regular maintenance to ensure networks operate correctly, set

up or repair computer equipment, train users on new computer hardware or software, and walk customers through problem solving steps to fix computer and network systems problems.

Computer support specialists may provide assistance to computer users through phone, email, or in-person visits. They often work under network and computer systems administrators, who handle more complex tasks. They must be skilled in operating systems and technical and help desk support. Employers may also request certain IT certifications such as Security+, Network+, or certified A+ Technician.

“My favorite part of my job is the people I work with and the patients I am able to assist.” -Computer Support Specialist

Missouri Entry Annual Wage.....\$29,201

Missouri Average Annual Wage\$46,983

Missouri Experienced Annual Wage.....\$55,874

Healthcare Informatics Technician

Healthcare informatics technicians may work as bioinformatics technicians or informatics nurse specialists.

Bioinformatics technicians apply principles and methods of bioinformatics to assist scientists. They may build and maintain databases for processing and analyzing genomic or other biological information. Bioinformatics technicians typically maintain applications that process biologically based data, monitor database performance and perform any necessary maintenance or upgrades, and confer with researches, clinicians, or information technology staff to determine data needs and programming requirements.



Informatics nurse specialists apply knowledge of nursing and informatics to assist in the design, development, and ongoing modification of computerized health care systems. They typically develop or evaluate health information technology applications and tools to assist nurses with data management. They may also identify, collect, record and analyze data that are relevant to the nursing care of patient.

Healthcare informatics technicians must have knowledge of clinical informatics and bioinformatics. Some employers may also request that they be certified as a registered health information administrator.

Missouri Entry Annual Wage.....	\$41,720
Missouri Average Annual Wage	\$60,235
Missouri Experienced Annual Wage	\$69,493

Network Systems/Data Systems Analyst

Network and data systems analysts are responsible for the day-to-day operation of computer networks. They organize, install, and support an organization's computer systems, including local area networks (LANs), wide area networks (WANs), network segments, intranets, and other data communication systems.

Network and data systems analysts typically determine what network and data systems an organization needs, install hardware and software, maintain network and computer security, and train users on the proper use of hardware and software. Analysts may also help network architects who design and analyze network models. They may also participate in decisions about buying future hardware or software to upgrade the organization's network. Some analysts provide technical support to computer users, and they may supervise computer support specialists who help users with computer problems.

Network and data systems analysts need to be skilled in systems administration, network configuration, and operating systems. Employers may also request they have certain IT certifications such as Security+, Network+, or Cisco Certified Network Associate.

Missouri Entry Annual Wage.....	\$45,679
Missouri Average Annual Wage	\$71,093
Missouri Experienced Annual Wage	\$83,799

Data Analyst

Data analysts study an organization's current computer systems and procedures and make recommendations to management to help the organization operate more efficiently and effectively.

Data analysts typically consult with manager to determine the role of IT in an organization, devise ways to make existing computer systems meet new



needs, and design and develop new systems by choosing and configuring hardware and software.

Data analysts use a variety of techniques to design computer systems such as data-modeling systems, which create rules for the computer to follow when presenting data, thereby allowing analysts to make faster decisions. They also do information engineering, designing and setting up information systems to improve efficiency and communication. They must have knowledge of IT skills such as SAP, SQL, and Oracle. Employers may also request they have a project management certification, or certain IT certifications such as Security+ or Network+.

Missouri Entry Annual Wage.....	\$51,725
Missouri Average Annual Wage	\$78,679
Missouri Experienced Annual Wage	\$92,157

Computer Specialist

A computer specialist may work as a database administrator or a computer programmer. Database administrators use software to store and organize data. They typically identify user needs to create and administer databases, and ensure databases are operating efficiently, making and testing modifications to the database when needed. They make sure that data are available to users and are secure from unauthorized access. Database administrators sometimes work with an organization's management to understand the company's data needs and to plan the goals of the database.

Computer programmers write code to create software programs. They turn the program designs created by software developers and engineers into instructions that a computer can follow. Computer programmers typically write programs in a variety of computer languages and update and expand existing programs. They also must debug programs; if a program does not work correctly they check the code for mistakes and fix them.

Computer specialists must have knowledge of IT skills such as SQL, Java, and Oracle. Employers may also request they have a project management certification, or certain IT certifications such as Security+.

Missouri Entry Annual Wage.....	\$44,347
Missouri Average Annual Wage	\$72,253
Missouri Experienced Annual Wage.....	\$86,206



Many colleges offer programs for the occupations in these career pathways. Here is where you can find more information on academic programs.



Crowder College

www.crowder.edu/business-community/grants/mohealthwins



East Central College

www.eastcentral.edu/future/mohealthwins.php



Jefferson College

www.jeffco.edu/jeffco/content/view/864/116



Linn State Technical College

www.linnstate.edu/business/MoHealthWins.php



Metropolitan Community College

mccck.edu/mowins



Mineral Area College

www.mineralarea.edu/MoHealthWINS



Moberly Area Community College

www.macc.edu/index.php/mohealthwins-home



North Central Missouri College

www.ncmissouri.edu/programs/mowins/Pages/mohealthwins.aspx



Ozarks Technical Community College

www.otc.edu/mowins/mowins.php



St. Louis Community College

www.stlcc.edu/Workforce-Solutions/MoHealthWINS



St. Charles Community College

www.stchas.edu/mohealthwins



State Fair Community College

www.sfccmo.edu/pages/1532.asp



Three Rivers College

www.trcc.edu/news/2012/10/1002.php

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