



Navigating Health Care Careers

Charting Your Path from High School to Health Care

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IMAGING

Seeing People from the Inside Out

Imaging Technologists use different types of medical equipment to produce images of the inside of a patient's body. Depending on the type of equipment, images can be produced using sound waves, radiofrequency pulses, X-rays and radiopharmaceuticals. Imaging Technologists also work directly with physicians to perform procedures using the guidance of imaging equipment.

Types of Positions

- **CT Technologists** – Use CT scanners to acquire cross sectional images of the body. CT Techs can also work alongside radiologists to perform procedures using the CT scanner.
- **Interventional Radiology Technologists** – Use fluoroscopic X-ray equipment to take live images of the body. This equipment assists the radiologist and technologist while placing guidewires, catheters, stents, coils and other devices during procedures.
- **Nuclear Medicine Technologists** – Inject patients with radiopharmaceutical agents then place them under a special camera to produce images.
- **Mammography Technologists** – Use X-ray equipment to produce images of the breasts.
- **MRI Technologists** – Use strong superconducting magnets to produce cross-sectional images of the body.
- **Ultrasound Technologists** – Sometimes called sonographers, use high frequency sound waves to produce images of the body. Many different procedures can be performed using ultrasound machines.
- **Radiologic Technologists** – Use X-ray equipment to acquire images. Sometimes called X-ray techs, they can work alongside a radiologist to perform procedures using fluoroscopy or live X-ray imaging.

Educational Pathways

There are several ways to become an Imaging Technologist: certificate program, associate degree or a bachelor's degree. WakeMed works closely with Wake Technical Community College and hosts their students for clinical rotations.

Fun Facts

- X-rays were discovered in 1895.
- In the 1930s to 1950s a fluoroscope machine was used in shoe stores so customers could see their feet inside the shoes.
- CT scanning was invented in the research labs of the British music company Electric and Musical Industries (EMI). EMI was also the record company for The Beatles.
- A 1.5 Tesla magnet will pull a bobby pin at approximately 40 mph!



PATHOLOGY : HISTOLOGY AND CYTOLOGY

Where Art and Science Meet

Histology is the study of microscopic structures of tissues and organs through sectioning, staining and examining those sections under a microscope. Histotechnologists and histotechnicians play a crucial role in the diagnosis and treatment of diseases by turning tissue samples into microscope slides for examination by a pathologist.

Types of Positions

- **Histology assistant** – Collect, label and prepare specimen for gross dissection. Other duties include preparing reagents and staining slides for microscope evaluations, cleaning, and processing paperwork.
- **Histotechnologists and histotechnicians** – Share a variety of similarities in their jobs but the basic duties of both professions are the same. Histotechnologists may have additional training and more responsibilities. For this reason, they can advance into leadership, supervisory or teaching positions.

Educational Pathways

- **Histology assistant** – High school diploma
- **Histotechnician** – High school diploma or associate degree
- **Histotechnologist** – Bachelor's degree in a related field (for example, biology or chemistry)

Some states require both histotechnicians and histotechnologists to be licensed, either individually or through their laboratory facilities. Licenses can be obtained through the American Society for Clinical Pathology certification program.



PATHOLOGY: PHLEBOTOMY & SPECIMEN PROCESSING

Phlebotomy is drawing clinical laboratory blood samples from patients, in the inpatient and outpatient setting. These employees also do all the sample receiving and a lot of sample processing (centrifuging and aliquoting).

Types of Positions

- **Clinical Services Techs** – Phlebotomists
- **Specimen Processing Techs** – Receive and process samples

Educational Pathways

High school/GED and the completion of a phlebotomy program. WakeMed prefers certification in phlebotomy.

Fun Facts

- The inpatient phlebotomist will draw about 500 patients a month, or 6,000 a year.
- Bloodletting began in ancient Egypt to cure the body from disease and 'evil spirits.'
- George Washington died due to bloodletting when he had a very bad sore throat, they removed 5-7 pints of blood.



CLINICAL LABORATORY SCIENCE

Saving Lives by Providing Results

Microbiology Subspecialty

In the microbiology lab we set up patient samples by either performing culture (identifying the growth of bacteria, fungi, AFB), and/or automated PCR testing (identifying pathogens, parasites and bacteria). Cultures are separated by source; for example, there is a bench for urines, blood, sterile body fluids, wounds and non-sterile body fluids, respiratory sources and miscellaneous cultures. Upon identifying the pathogen(s) in a specific culture, we then carry out antibiotic testing to help the caretaker decide what medicine would help to clear up the infection. Each employee is scheduled to work a certain area for the day, and we maintain competency in a variety of areas within the microbiology lab.

Types of Positions

Medical Laboratory Technicians and Medical Laboratory Technologist/Scientists work alongside each other in the laboratory with some roles specific to their training or degree, depending on the laboratory they are working in. Leadership roles are often held by Medical Laboratory Scientists, who may have advanced degrees (master's and doctorate degrees). All working bench techs must maintain an active and valid licensure and stay up to date through continuing education.

Educational Pathways

- **Medical Laboratory Technician (MLT)** – Two-year associate degree
- **Medical Laboratory Technologist/Scientist (MLS)** – Four-year bachelor's degree

There are several educational pathways to become a MLT or MLS. WakeMed works closely with community colleges and universities, hosting students for their clinical rotations as they work towards their degree.

Fun Facts

- Microbiology came into being largely through the experiments of Louis Pasteur in France, Robert Koch in Germany, and others in the late 1800s who established the importance of microbes to humans.
- All strains of penicillin today are descendants from a single moldy cantaloupe discovered in 1943.
- There are more bacteria in your mouth than there are humans on earth.
- In 1887, Dmitri Ivanovsky was sent to what is now Ukraine to investigate a disease damaging tobacco plants. He found what he believed to be a toxin caused by a bacterium he called "virus." It wasn't until the 1950s with an electron microscope that the true nature of viruses was discovered.
- Medical Lab staff can usually tell what bacteria is growing on the plate based on the appearance and the smell. Some examples include: *Pseudomonas aeruginosa* which smells like grapes and has a metallic sheen; *Proteus mirabilis* swarms and spreads all over the plate and some say it smells like chocolate cake; and *Streptococcus anginosus* smells like buttered popcorn!



CLINICAL LABORATORY SCIENCE

Saving Lives by Providing Results

Chemistry Subspecialty

The aim of Medical Laboratory Scientist (MLS) and Medical Laboratory Technician (MLT) is to help the doctor to arrive at a diagnosis of the patient's condition by evaluating samples and carrying out appropriate tests. They perform in-vitro analysis of biologic specimens according to established procedures for routine and specialized areas, such as chemistry, hematology, coagulations, and urinalysis and body fluids. They also participate in supportive functions including quality control, instrument operation, troubleshooting, teaching / training and problem resolution.

Types of Positions

- **Medical Laboratory Scientist (MLS)** – also known as a Medical Technologist (MT) or Clinical Laboratory Scientist (CLS)
- **Medical Laboratory Technologist**

Educational Pathways

- **Medical Laboratory Scientist** – Four-year bachelor's degree
- **Medical Laboratory Technologist** – Two-year associate degree

State licensure may also be required

Fun Fact

- The earliest histories of clinical laboratory sciences begin around the mid-1920s.



CLINICAL LABORATORY SCIENCE

Saving Lives by Providing Results

Transfusion Service Subspecialty

The Transfusion Service meets the needs of hospital inpatients and outpatients who require blood transfusions by performing lab testing to match patients with compatible blood donors based on their blood type. Additional testing is done for patients who have developed antibodies in their plasma against antigens found on red blood cells. These lab scientists are crucial in providing life-saving blood products for patients involved in traumas, surgical cases, and labor and delivery complications, as well as supporting patients who have chronic diseases or are undergoing cancer treatment.

Types of Positions

Medical Laboratory Technologists (MLSI, MLSII, MLSIII)

Educational Pathways

Associate degree in Medical Laboratory Technology or bachelor's degree in Clinical Laboratory Science. Certifications are available via American Society for Clinical Pathology.

Fun Fact

- Blood cannot be manufactured or produced; all blood donations start with a volunteer donor. It is a precious resource!
- Someone in the United States needs blood every two seconds.
- Newborn babies don't begin producing their own plasma antibodies until around four months of age.
- Red blood cells and platelets are living cells and have a short shelf-life. They must be stored and transported in conditions that keep them viable so they can do their job when transfused to the recipient.



RESPIRATORY THERAPY

Catch Your Breath

A respiratory therapist is a health care professional who specializes in evaluating, treating and caring for patients with respiratory conditions. They are trained to assess and monitor the respiratory system, administer therapeutic treatments, and provide education and support to patients with breathing disorders.

Respiratory therapists work closely with physicians to develop and implement respiratory care plans, which may include the use of oxygen therapy, mechanical ventilation and medication administration. They also play a vital role in emergency situations, providing life-saving intervention such as cardiopulmonary resuscitation (CPR) and airway management.

With their expertise in respiratory care, these dedicated professionals help patients improve their lung function, manage chronic respiratory conditions and regain optimal respiratory health.

Types of Positions

- **Clinical Respiratory Therapist** – The most common role for a Respiratory Therapist, they work directly with patients in hospitals, clinics and other health care settings.
- **Pulmonary Rehabilitation Therapist** – Work with patients who have chronic respiratory conditions such as asthma, COPD or pulmonary fibrosis. They develop personalized exercise and breathing programs to help patients improve their lung function and quality of life.
- **Sleep Lab Specialist** – Work in sleep clinics or laboratories, conducting sleep studies and diagnosing and treating sleep-related breathing disorders such as sleep apnea.
- **Research** – Pursue careers in education or research, working in academic institutions, training future respiratory therapists or conducting research.
- **Home Care** – Provide respiratory care to patients in their homes. They assess patients' needs, set up and teach the proper use of home medical equipment and provide ongoing support.
- **Cardiopulmonary Rehab** – Work with patients who have cardiovascular diseases or have undergone cardiac surgeries. They develop exercise programs and provide education and support to help patients improve their cardiovascular and respiratory health.

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RESPIRATORY THERAPY

Catch Your Breath

Types of Positions *(continued)*

- **Pulmonary Function Test** – Perform diagnostic tests to evaluate lung function and diagnose respiratory conditions. They conduct pulmonary function tests, exercise stress tests and other assessments to assess lung capacity and function.
- **Respiratory Educator** – Provide training and education to other health care professionals, patients and their families. They may develop educational materials, conduct workshops and seminars, and provide ongoing support and guidance.
- **Telehealth Respiratory Therapist** – Provide remote respiratory care and consultations to patients through video calls and virtual platforms.
- **Management/Administrative** –Oversee respiratory therapy departments, coordinate staffing and resources, and contribute to quality improvement initiatives.

Educational Pathways

Two-year associate degree or four-year bachelor's degree. There are also options to complete a master's degree.

Fun Facts

- A sneeze can travel at speeds of up to 100 miles per hour.
- Our nostrils take turns being the primary air intake. This cycle typically alternates every few hours.
- On average, we take around 16 to 20 breaths per minute while at rest – or over 20,000 breaths each day.
- The human lungs are not symmetrical; the right lung has three lobes, while the left lung only has two.
- The human body produces approximately 1 liter of mucus per day, which helps to trap dust, pollen, and other airborne particles, preventing them from entering the lungs.



PHARMACY

We Are Pharmily!

The WakeMed Pharmacy department serves both inpatient and outpatient populations:

- The inpatient pharmacy team ensures that medications needed during an inpatient stay are delivered safely and efficiently to the patient. Inpatients often need medications that require sterile or non-sterile compounding such as specialized creams or intravenous medications that must be carefully mixed by pharmacy technicians and checked by pharmacists. Inpatient pharmacists also serve as a part of the patient's medical team and provide input to nurses and physicians on medication dosing and potential side effects.
- The WakeMed Outpatient Pharmacy fills prescription medications for our employees and our patients. The outpatient pharmacy also delivers medications directly to the patient's bedside prior to discharge and can have medications delivered to someone's home.

Types of Positions

- Pharmacist
- Pharmacy Technician
- Pharmacy administrative roles – business manager, financial analyst, pharmacy buyer

Educational Pathways

- Pharmacist – Bachelor's degree and doctor of pharmacy (additional four-year degree); optional resident programs of 1-2 years of additional training
- Pharmacy Technician – High school diploma or equivalent and certification

Fun Facts

- **Meds to Beds Program** – For our patients in the hospital, pharmacy technician delivers prescription medications directly to the patient's bedside and can answer questions that the patient or family may have before they leave. This saves the family a trip to another retail pharmacy on their way home.



OUTPATIENT REHABILITATION

Wellness Matters

Outpatient Rehab includes three subspecialty areas:

- **Exercise Physiology** is the study of the body's responses to physical activity. These responses include changes in metabolism and physiology of different areas of the body like the heart, lungs and muscles, and structural changes in cells.
- **Nutrition** is the study of how food and drink affect our bodies with regard to essential nutrients needed to support human health.
- **Physical Therapy** is the study of human movement as it applies to overall health, rehabilitation of injury, fitness, and prevention of injury.

Types of Positions

- **Exercise Physiologist (EP)** – Can work in a variety of clinical settings like cardiac rehab, cardiovascular testing and therapy clinics as well as fitness centers or sports teams.
- **Registered Dietitian (RD)** – Provide counseling to help individuals live healthier lives through nutrition. They can work in a variety of areas, including hospital, outpatient, long term care, community nutrition, food service management, etc.
- **Physical Therapist (PT)** – Can work in a variety of areas including outpatient clinics, hospitals, nursing homes, schools, in patient's homes, with sports teams and more.

Educational Pathways

- **Exercise Physiologist** – Undergraduate degree, master's degree, certification.
- **Registered Dietitian** – Undergraduate degree, master's degree (1-2 years) and dietetic internship (1 year).
- **Physical Therapist** – Undergraduate degree, doctoral degree including clinical affiliations followed by state licensure. Advanced certifications available.

Fun Facts

- From the earliest recorded history, nutrition has been part of the cause, cure and prevention of diseases.
- The vision of Exercise is Medicine® (EIM) is a global health initiative to make physical activity assessment and promotion a standard in clinical care, connecting health care with evidence-based physical activity resources.
- Physical therapy was officially recognized as a profession during World War I when female civilian employees of the U.S. Army were tasked with rehabilitating injured soldiers using primarily massage techniques.



CLINICAL ENGINEERING

The Life of the Equipment Doctors

Clinical Engineering and Biomedical Engineering are responsible for ensuring that medical equipment is safe, available and appropriate for the care being given. These teams are involved in the entire service life cycle of a medical device, from the prepurchase evaluation of equipment process, until it is removed from the facility.

We work very closely with all clinical departments to support health care providers as they work to ensure the best medical outcomes for patients. Clinical Engineering Technicians are involved in equipment inspection, testing, calibration, maintenance, hardware replacement, networking, configuration, upgrades and more. Clinical Engineering can be called upon to observe equipment in use to help identify equipment issues or to make emergency repairs.

Types of Positions

- **Clinical Engineer**
- **Cybersecurity Administrator**
- **CMMS Administrator**
- **Biomedical Equipment Technician**
- **Radiology Engineering Technician**
- **Clinical Engineering Project Manager**
- **Leadership Roles** – Supervisor, Manager or Director

Fun Facts

- At WakeMed, the Clinical Engineering Department supports over 34,000 medical devices – everything from a basic thermometer to an MRI machine and everything in between.
- Biomedical Engineering is not new. There is evidence of biomedical engineering all the way back to 1069 - 664 B.C.
- In 2000, an Egyptian mummy was found with a functioning prosthetic big toe.

Educational Pathways

- **Associate degree** in Biomedical Technology, Computer Science, Information Technology, Electronics Technology, etc.
- **Bachelor's degree** in Biomedical Engineering, Electrical Engineering, Electro-Mechanical Engineering, Electronics Engineering, etc.
- **Department of Defense Training Certificate** (Military)



MOBILE CRITICAL CARE SERVICES

Health Care on Wheels

Mobile Critical Care Services provides ground transportation for patients into, out of and across the WakeMed system. We are a comprehensive service with 27 transport vehicles and provide a full scope of services including critical care, advanced life support, basic life support and wheelchair transport.

Our critical care ambulances are essentially an ICU on wheels and our teams provide care for even the most complex of patients that require movement between facilities.

Types of Positions

- **Emergency Medical Technician (EMT)**
- **Paramedic**
- **Critical Care Paramedic**
- **Critical Care Nurse**
- **Pediatric/Neonatal Critical Care Nurse**
- **Respiratory Therapist**

Educational Pathways

- **EMT** – Complete a North Carolina approved EMT course and pass a state exam.
- **Paramedic** – Associate degree in Emergency Medical Science, bachelor's degree in Emergency Medical Care or continuing education classes at a community college (for certified EMTs only). Once you earn paramedic certification, option to earn certifications that focus on critical care transport.
- **Nurse** – Associate degree or bachelor's degree and become licensed. Options to complete master's degree.
- **Respiratory Therapist** – Associate degree or bachelor's degree. Options to complete master's degree.

Fun Facts

- With a department of over 130 employees, WakeMed Mobile Critical Care completes more than 21,000 patient transports annually.
- Your office is on wheels – you won't be inside a building every day with the same view.
- Each shift can be full of surprises. You never know where you may end up. One day you may never leave Wake County and the next you may go to the mountains, the coast, or even another state.



THE EMERGENCY DEPARTMENT

It's Like a Box of Chocolates!

Working in the emergency department, you are constantly crafting solutions as deliciously diverse as a box of chocolates – from unwrapping mysteries like a medical Sherlock Holmes to juggling tasks faster than Augustus Gloop devours sweets. Every patient is a new flavor: some are time-sensitive emergencies, others are caramel complexities, and a few are surprise centers waiting to be discovered. Your scrubs are the chocolate wrapper, hiding a heart of gold, and your smile is the cocoa powder sprinkled on top, sweetening even the toughest moments. It's a world where resilience melts obstacles like chocolate on a sunny day, leaving a taste of triumph in every shift.

Types of Positions

- Nurse
- Paramedic
- Respiratory Therapist
- Nurse Aide
- Physician
- Physician Assistant (PA)
- Nurse Practitioner (NP)
- Registrar
- Environmental Services
- CT Technologist
- Radiology Technologist
- Pharmacist
- Phlebotomist
- Nurse Manager
- Nurse Supervisor
- Nurse Educator

Educational Pathways

In the Emergency Department there are vastly different jobs that depend on one another, therefore educational pathways vary.

- **Emergency Medicine Doctors** must complete medical school, then a residency. Extra training in fellowship programs is common for most physicians.
- **PAs and NPs** obtain a four-year undergraduate degree and then pursue additional training at the master's or doctoral level.
- **Nurses** must complete an accredited nursing program and pass the licensing exam. They can pursue associate or bachelor's degrees.
- **Nurse Aides** must complete an accredited course for licensing through a community college.
- **Respiratory Therapists, CT Techs and Radiology Techs** must complete a two- or four-year accredited program and then pass national boards for licensure. Some specialties require additional course work.

Fun Facts

- If you're the worst, you're first in triage!
- There are greater than 10,000 firework-related injuries treated in the ER each July 4!
- Nearly 4,000 people are treated for foreign body removal in the ER (beads in noses, bugs in ears).
- ER personnel are superstitious. We do not say the words "QUIET, CALM, NOT BUSY" or "SLOW."



OPERATING ROOM (OR)

Trauma Team to OR 5!

The Operating Room is an exciting, diverse and highly technical part of any hospital. The name 'operating room' is misleading because it is a large department employing several specialty service lines. Each specialized area is like a puzzle piece – every piece must fit exactly right to see the whole picture.

Types of Positions

- Surgeon
- Physician Assistant
- Anesthesiologist
- Certified Registered Nurse Anesthetist
- Anesthesia Technician
- Perfusionist
- Registered Nurse
- Registered Nurse First Assist
- Certified Surgical Technologist
- Surgical Technologist First Assist
- Patient Care Technician
- Nurse Educator

Educational Pathways

- One surgical team consists of an array of people with differing skill sets and areas of expertise; therefore, educational pathways are vastly different.
- Surgeons and anesthesiologists must complete medical school, then four to eight years of residency. Extra training in fellowship programs is required for surgeons specializing in areas such as neurosurgery or cardiac surgery.
- After graduating from nursing school, registered nurses must complete a year-long intensive training program specific to the OR. Certified surgical technicians graduate from an accredited program, then receive hands-on, integrative training.

Fun Facts

- You can't touch your face if you are scrubbed in a case. If you get an itch, someone else must scratch it for you!
- The OR is not like Grey's Anatomy.
- Some of our skin grafts are made from fish skin.
- Surgeons can use robots for certain cases, such as prostatectomies and colectomies.



CRITICAL CARE

Into the Heart of Healing

Critical care, or intensive care, refers to the specialized medical care provided to patients with life-threatening conditions requiring comprehensive monitoring and support. This level of care is typically administered in an Intensive Care Unit (ICU) by a multidisciplinary team of health care professionals, including intensivists, nurses, respiratory therapists, pharmacists and other specialists.

Critical care is not just about providing medical interventions. It's about stabilizing patients, managing their complex medical conditions, and improving their chances of recovery while addressing potential complications. In other words, it's about giving patients the best possible chance at survival and a return to health.

Types of Positions

- Clinical Nurse
- Nurse Tech
- Intensivist
- Advanced Practice Provider (APP)
- Respiratory Therapy
- Physical, Occupational & Speech Therapy
- Social Worker
- Dietitian
- Chaplain

Critical Care Nurses provide direct care to patients with life-threatening conditions. Their key duties include:

- Continuously monitor patients' vital signs using advanced medical equipment.
- Administer and manage medications.
- Operate and manage life support equipment, such as mechanical ventilators, to assist or replace spontaneous breathing.
- Assist physicians/APPs with procedures (intubation, central line placement, arterial line insertion etc.).
- Conduct thorough and frequent assessments of the patient's physical and mental status, identifying any changes that may require intervention; maintain accurate and detailed patient records, documenting all aspects of care.
- Develop and implement individualized care plans in coordination with other health care team members.

- Respond swiftly and effectively to medical emergencies, such as cardiac arrest.
- Support patients' families, informing them about their loved one's condition and care.
- Follow strict infection control protocols to prevent hospital-acquired infections

Educational Pathways

Associate or bachelor's degree in nursing and pass licensure exam; option to obtain master's or doctorate in nursing and/or certification in critical care nursing (CCRN).

Fun Facts

- Intensive care units (ICUs) were developed during the polio epidemic in Copenhagen in the 1950s.
- ICU work can be unpredictable and fast-paced. Critical care nurses and doctors encounter a wide range of medical conditions and emergencies, making each day unique and challenging.
- While critical care can be a high-stress environment, many health care professionals find it highly rewarding to make a significant difference in the lives of critically ill patients and their families.



MEDICAL-SURGICAL (MED-SURG)

Ports: A Cath-tivating Demonstration

6A Oncology cares for cancer patients receiving active treatment, management of symptoms related to their cancer or treatment, hematology consults and end-of-life care.

Types of Positions

- Registered Nurses
- Nurse Techs
- Advanced Practice Nurses
- Physicians
- Social Workers
- Case Management

Educational Pathways

Educational pathways vary depending on the position you pursue.

Fun Facts

- Florence Nightingale is credited with the establishment of modern nursing practices.
- The New England Hospital for Women and Children, the first nursing school in the US, opened in 1862.



REHABILITATION HOSPITAL

The Rehab Experience: Think Fast!

Rehabilitation clinicians are professionals who help individuals with physical, developmental or mental disabilities gain or restore functional skills to maximize their independence. These clinicians provide patient evaluations to determine what needs to be addressed and then prescribe a treatment plan to guide the care of the patient. Because of the singular focus on function and improving the quality of life, there are similarities in the work of each discipline, and they work together for the best outcome.

Types of Positions

- **Case Manager** – Work to improve the lives of patients by working with them to overcome challenges and to have the tools necessary to re-integrate into the community.
- **Physical Therapist** – Helps to restore function, movement and activity with a focus on physical performance, strength and mobility.
- **Occupational Therapist** – Works to improve the skills you need to perform daily tasks (such as dressing, cooking, etc.). These skills can be motor, strength, cognitive, visual, sensory or the ability to use adaptive equipment.
- **Speech Therapist** – Works to improve or restore a patient’s ability to communicate, speak or swallow; may also work to improve memory and/or cognitive functions.
- **Recreation Therapist** – Plan, direct and coordinate recreation-based medical treatment programs to help maintain or improve patients’ physical, social and emotional well-being.
- **Rehabilitation Nurse** – The goal of rehab nursing is to promote optimal health and assist individuals in adapting to an altered lifestyle to regain freedom and independence.
- **Certified Nursing Assistant** – Performs patient-centered tasks to help patients achieve the highest level of independence by assisting with mobility, hygiene, vital sign monitoring, range of motion exercises and more.
- **Neuropsychologist** – Administer tests that tap into different brain abilities, analyze the results and then provide education and recommendations to the patient and family. They focus on how the brain works, either to better understand strengths and weaknesses or to determine how changes in the brain from injury, medical issues, aging or other conditions might affect thinking skills, behavior and emotions.

Educational Pathways

- **Case Manager:** Bachelor’s degree followed by a master of social work (MSW) degree. Following 3,000 hours of clinical practice, you can apply for your Licensed Clinical Social Worker (LCSW) credentials.
- **Physical Therapist:** Bachelor’s degree in a related field (health science, biomechanics, exercise, or biology), doctor of physical therapy (DPT) and pass the national exam and obtain state licensure.

(continued)



REHABILITATION HOSPITAL

The Rehab Experience: Think Fast!

Educational Pathways *(continued)*

- **Occupational Therapist:** Bachelor's degree in a related field (biology, kinesiology, psychology, sociology, anthropology, liberal arts, or anatomy) followed by a master's or doctoral level program in Occupational Therapy. Pass the national exam and obtain state licensure.
- **Occupational Therapy Assistant:** Associate or bachelor's degree, pass the national exam, and obtain state licensure.
- **Speech Language Pathologist:** Master's degree, pass the national exam following one year of supervised clinical experience, and obtain state licensure.
- **Recreation Therapist:** Bachelor's degree or higher in Therapeutic Recreation or Recreation (with an emphasis in Recreation Therapy/Therapeutic Recreation), complete an internship, pass the national certification exam, and obtain state licensure.
- **Rehabilitation Nurse:** Associate or bachelor's degree or higher in nursing, pass the licensure exam. Option to pursue certification as a rehabilitation nurse.
- **Certified Nursing Assistant:** Complete CNA program (available at many community colleges and vocational schools).
- **Neuropsychologist:** Doctoral degree in clinical psychology (Ph.D. or Psy.D.) and additional training specifically in neuropsychology. Must also pass a state board exam, obtain a license as a clinical psychologist and complete a two-year post-doctoral fellowship.

Fun Facts

- Thousands of years ago, the ancient Chinese employed Kung' Fu, a movement therapy to relieve pain.
- Asclepiades used occupational therapy techniques to treat mental illness in 100 BC.
- The speech language pathology profession began in England in the 18th century.
- Social work is one of the fastest growing careers in the U.S.
- Recreational therapy is ranked #10 in college careers that lead to a satisfying work life.



ADVANCED PRACTICE PROVIDER (APP)

There is an APP for That!

Advanced Practice Providers (APPs) are professionals from different education pathways licensed to provide medical care. They are not physicians but often can perform the same level of care depending on the specialty of practice. Depending on the state they practice in, they have different levels of autonomy within their practice. Some require physician supervision and others do not. Most can complete their studies within eight years of high school graduation. They have a wide range of areas they can practice and more flexibility to explore other specialties and work hours than other professions.

Types of Positions

- Physician Assistant
- Anesthesia Assistant
- Certified Nurse Anesthetist
- Certified Nurse Midwife
- Clinical Nurse Specialist
- Nurse Practitioner
- Clinical Pharmacist Practitioner

- **Clinical Pharmacist Practitioner** – Bachelor’s degree followed by four years of pharmacy school (2+ years of pre-pharmacy prerequisites required), and optional residency training. Becoming a Clinical Pharmacist Practitioner (CPP) requires additional qualifications, including board certification, residency training or at least three years of clinical experience.

Fun Fact

- We can jump from one specialty to the next – today trauma, tomorrow family medicine.

Educational Pathways

- **Physician Assistant and Anesthesia Assistant** – bachelor’s degree followed by master’s degree or doctorate (some require patient care experience) and national board certification.
- **Certified Nurse Anesthetist (CRNA), Certified Nurse Midwife, Clinical Nurse Specialist & Nurse Practitioner** – bachelor’s degree in nursing, master’s degree (doctorate for CRNA) and national board certification. Most master’s programs prefer some nursing experience prior to applying; CRNAs must have two years of critical care nursing experience before applying.



MEDICAL SIMULATION

Building Confidence and Competence

Medical simulation is an educational technique that uses realistic scenarios and equipment to replicate clinical situations for training purposes. It involves the use of high-fidelity mannequins, virtual reality and other advanced technologies to create lifelike medical environments. During simulations, health care professionals can practice procedures, decision-making and teamwork in a safe, controlled setting. This method allows for the rehearsal of rare or complex cases, immediate feedback, and the opportunity to learn from mistakes without risking patient safety. By enhancing clinical skills and confidence, medical simulation plays a crucial role in improving patient care and outcomes.

Types of Positions

There are several positions available in the field of medical simulation, each playing a vital role in the training and education of health care professionals.

- **Simulation Technician/Specialist:** Responsible for the technical aspects of simulation, including the setup, operation and maintenance of simulation equipment and software. They ensure that simulations run smoothly and troubleshoot technical issues.
- **Simulation Educator/Instructor:** Design and deliver simulation-based training programs. They create realistic scenarios, guide participants through simulations and provide feedback during debriefing sessions to enhance learning outcomes.
- **Simulation Coordinator:** Manage logistics of simulation activities, including scheduling sessions, coordinating with faculty and staff, and ensuring that necessary resources are available. They also handle administrative tasks related to the SIM Center.
- **Simulation Operations Specialist:** Oversee the day-to-day operations of the SIM Center, ensure all equipment is functioning correctly, manage inventory and support the technical and educational staff.

Educational Pathways

Education pathways vary, but often include a bachelor's degree in nursing, medicine, education, health care management or psychology. Advanced degrees (master's or doctorate degree) are beneficial and sometimes preferred.

Common certifications include Certified Healthcare Simulation Operations Specialist (CHSOS) and Certified Healthcare Simulation Educator (CHSE). Specific certifications for debriefing facilitators are less common but valuable.

Fun Facts

- Participating in a simulation event can be intimidating. We like to say that we are "a judgement-free zone" (just like Planet Fitness) to create a safe environment where participants can make mistakes and everyone learns.
- Simulation events should also be confidential. Just like Las Vegas: What happens in the SIM Center stays in the SIM Center.
- No one ever gets hurt in the SIM Center, we simply hit the reset button.