DESCRIPTION OF HEALTH PROFESSIONS

Behavioral Health or Mental Health Professional is a health care practitioner who offers services for the purpose of treating mental illness or improving an individual’s mental health. Mental health is how a person thinks, feels, and acts when faced with life’s situations. It is how people see themselves, their lives and the other people in their lives. Mental health is how they evaluate their challenges and problems, and explore choices. A person who has a mental health problem can often be treated successfully with therapy, medication or a combination of the two. There are many types of behavioral health professionals. This broad category includes psychiatrists, psychologists, psychiatric nurse practitioners, physician assistants, social workers, and mental health counselors.

Biomedical Scientists/Graduate Studies are critical thinkers, innovators, team leaders/members, and teachers/mentors who bridge the gap between the basic sciences and medicine. They work in academic research institutions or pharmaceutical & biotechnology companies, performing multidisciplinary research to learn about the functioning of molecules, cells, organisms and populations. New discoveries made by biomedical scientists are then applied to prevent and treat human diseases. Those who work in universities also play an important role in training future health professionals. Biomedical scientists with strong writing and communication skills may work for mass communication companies, or may impact policy and law by working in a government agency. Some work for philanthropic, non-profit organizations that raise public awareness and support research in the biomedical sciences. Biomedical scientists hold the Ph.D. degree in one of the biomedical disciplines (epidemiology, neuroscience, cell biology, bioinformatics, physiology, molecular biology, immunology, biochemistry, cancer research, genetics, toxicology, pharmacology, etc.)

Clinical Laboratory Scientists (Medical Technologists) are responsible for the development, performance and evaluation of laboratory testing that is needed in patient medical care and clinical research. 70% - 80% of medical decisions are based on their accurate and precise results. Clinical Laboratory Scientists have a wide range of expertise including clinical chemistry, hematology, forensics, toxicology, molecular diagnostics, transfusion medicine, microbiology diagnostics and antibiotic therapy, and transplant services. A Bachelor of Science degree in Clinical Laboratory Science will give you the ability and knowledge to be a generalist and work in all areas mentioned above or become a specialist in one area such as microbiology or molecular diagnostics.

Clinical Perfusionists work as a member of an open-heart, surgical healthcare team by operating the life-sustaining equipment that keeps patients alive during major surgical procedures. During open heart surgery, a patient’s heart is immobilized and cannot function in a normal fashion while the operation is being performed. The perfusionist uses the heart-lung machine to divert and circulate the patient’s blood outside the body and return it to the patient. In effect, the machine assumes the function of both the heart and lungs. In addition to the heart lung machine, perfusionists often function in supportive roles for other medical specialties in operating mechanical devices to assist in the conservation of blood and blood products during surgery, and provide extended, long-term support of patient’s circulation outside of the operating room. Perfusionists may be employed by hospitals, by surgeons or as part of a group practice.
Cytotechnologists study specially stained slides of human cells under the microscope for purposes of diagnosing cancer, precancerous lesions, benign tumors, infectious agents, and inflammatory processes. These professionals use their expert knowledge of the function and structure of human cells to identify minute abnormalities in the cell structure allowing for detection and diagnosis of disease. Cytotechnologists are employed at hospitals, private laboratories, university medical centers and government facilities.

Dentistry is the branch of the healing arts and sciences devoted to maintaining the health of the teeth, gums and other hard and soft tissues of the oral cavity and adjacent structures. A dentist is a scientist as well as a clinician, dedicated to the highest standards of health through prevention, diagnosis, and treatment of oral diseases and conditions. Dentists provide a wide range of care that contributes to the overall health of a patient by preventing tooth decay, periodontal disease, malocclusion, and oral-facial anomalies. Dentists are also instrumental in the early detection of oral cancers and systemic conditions of the body, in which the first symptoms oftentimes first appear in the oral cavity. While the majority of dentists are involved in direct patient care, many others teach, conduct research, and work in public and institutional clinics. The job outlook for dentistry remains strong.

Dental Hygienist offers a wide range of challenges. In the dental office, the dentist and the dental hygienist work together to meet the oral health needs of patients. Since each state has its own specific regulations regarding their responsibilities, the range of services performed by hygienists varies from state to state. Some of the services provided by dental hygienists may include:

- patient screening procedures; such as assessment of oral health conditions, review of the health history, oral cancer screening, head and neck inspection, dental charting and taking blood pressure and pulse
- taking and developing dental radiographs (x-rays)
- removing calculus and plaque (hard and soft deposits) from all surfaces of the teeth
- applying preventive materials to the teeth (e.g., sealants and fluorides)
- teaching patients appropriate oral hygiene strategies to maintain oral health; (e.g., tooth brushing, flossing and nutritional counseling)
- counseling patients about good nutrition and its impact on oral health
- making impressions of patients' teeth for study casts (models of teeth used by dentists to evaluate patient treatment needs)
- performing documentation and office management activities

Eppley Institute for Research in Cancer
Many scientists who have completed a Ph.D. degree focused on cancer research work in state-of-the-art laboratories in universities, medical centers, governmental laboratories, and biopharmaceutical companies. Their research addresses the root causes of cancer, as well as the means of enhancing the detection and treatment of cancer. Additional areas of employment for Cancer Research Doctoral Program Ph.D. graduates include educating the next generation of scientists at colleges, working in positions that combine business and science (such as acting as a liaison between medical center research laboratories and companies that can manufacture new treatments for patients), serving as administrative directors in biopharmaceutical companies and government science agencies, and specializing in health-related media communications. At the University of Nebraska Medical Center, students can complete both an M.D. and a Ph.D. in Cancer Research in a compressed time frame, which opens great additional opportunities for clinical treatment and research careers for those who achieve this M.D./Ph.D. combined degree.
**Medical Nutrition Therapists** are registered dieticians. They are food and nutrition experts who work in a wide variety of employment settings, including healthcare, business, public health, education, research, and private practice. In health care, medical nutrition therapists educate patients about nutrition and administer medical nutrition therapy as part of the health care team. They teach nurses, physicians, other health care professionals, and students about nutrition and its role in patient care. Registered dieticians with an administrative focus may also manage the food service operations in these settings. They may also conduct research relating to nutrition and health in university or private industry settings.

**Medical Doctors (Physicians)** serve a fundamental role in our society to promote, maintain, and restore human health through the practice of medicine. Physicians will diagnose and treat disease and injury. There are many types of physician specialties as well as those considered general practitioners. General practitioners are usually the family doctors – those that are seen first and establish a long-term relationship with a patient and their family. Physicians can also specialize into fields based on disease/treatment type (dermatology), method of treatment (radiology), or type of patient (emergency medicine). Physicians must have detailed knowledge of academic disciplines to effectively diagnose and treat ailments (the science of medicine) and must also have the competence and bedside manner to apply it to practice (the art of medicine). Physicians will have completed a doctorate degree followed by 3-5 years of residency training.

**Nurses** protect, promote and optimize health and abilities, prevent illness and injury, alleviate suffering through the diagnosis and treatment of human response and advocate in the care of individuals, families, communities and populations. Nursing is a scientific profession that attracts both men and women and is changing in diversity in both gender and ethnicity. As licensed health professionals, nurses can be found not only at the bedside, but in a variety of settings serving as administrators, lobbyist, researchers, and educators both in the public and private sector. Those in nursing experience a career that is flexible. You may advance your education to a Master or Doctoral level and specialize your practice or research. A nurse practitioner is an advanced practice nurse who diagnosis, treats, consults, and prescribes and may work in both inpatient and outpatient situations. It’s one of the most trusted professions in the country.

**Pharmacists** are licensed health professionals who are experts in the science and art of drug therapy. As such, they are vital members of the health care team. The goal of pharmacy is to optimize the use of medications to cure, prevent, or ease the symptoms of disease. Pharmacists interpret prescriptions from physicians, then prepare and dispense the medications. They provide other health practitioners and patients with information about the uses, effects and interactions of medications. They assist patients in choosing over-the-counter medications and health products, as well as counsel patients to seek the advice and treatment of other health practitioners. Pharmacists may work in hospital or community pharmacies, colleges or schools of pharmacy, or in public health facilities. They may also work in pharmaceutical research in public institutions or private industry.

**Physical Therapists** (PTs) are health care professionals who evaluate and treat people with health problems resulting from injury or disease. Physical therapists assess joint motion, muscle strength and endurance, function of heart and lungs, and performance of activities required in daily living, among other responsibilities. Treatment includes a broad range of therapeutic exercise techniques, cardiovascular endurance training, and training in activities of daily living. Physical therapists must have a graduate degree from an accredited physical therapy program before taking the national licensure examination. The minimum educational requirement is a master’s degree, yet most educational programs now offer the doctor of physical therapy (DPT) degree. Licensure is required in each state where they practice.
Physician Assistants (PAs) are licensed health professional who practice medicine with physician supervision. Supervision is determined by state law and in Nebraska means the ready availability of a physician by telecommunications depending on your level of experience. Physician assistants are formally trained to provide diagnostic, therapeutic, and preventive health care services, as part of the Physician-PA team. They take medical histories, examine patients, order and interpret laboratory and diagnostic tests, and make diagnoses. PAs perform a number of procedures, including minor surgery, suturing, splinting and casting. Physician assistants instruct and counsel patients; they act as the primary care provider for many patients. They can prescribe medications in all 50 states within the U.S. Physician assistants may provide care in rural or inner city clinics, called outreach clinics, in which a physician may only be present one day each month. PAs are found in outpatient clinics, hospitals, and operating rooms; they work in a wide variety of medical and surgical specialties and sub-specialties.

Public Health is the science and practice of protecting the health and welfare of all people by preventing and controlling disease. Public health is comprised of different professions who do many activities like protecting the environment; identifying sources of illness in populations; controlling disease outbreak; evaluating the economic impact of changing demographics; developing media campaigns to promote healthy behavior; producing health policy legislation. There are many rewarding careers in public health, ranging from pure research to direct public education. Areas of specialization within public health include Health Service Administration, Biostatistics, Epidemiology, Behavioral Health Sciences, Health Education, Environmental Health, Biomedical / Infectious Diseases, International Health, Nutrition, and Maternal and Child Health. Students interested in pursuing public health careers find internships and jobs in government agencies, nonprofit and community based organizations, medical research institutions, bio/pharmaceutical and healthcare consulting firms.

Radiologic Science Technologists are professionals educated in multiple modalities that use imaging in the diagnosis and/or treatment of diseases of the human body. Each modality’s function is different based on what the physician or practitioner requires for diagnosis or treatment. Radiographers (Radiologic Technologists) use ionizing radiation to produce detailed diagnostic images of the human body. Cardiovascular Interventional Technologists perform invasive diagnostic or curative procedures such as angiograms and intravascular catheterizations. Computed Tomography (or CT) Technologists create cross sectional images of the body using a number of thin, rotating x-ray beams and computer. Diagnostic Medical Sonographers use special imaging equipment that directs sound waves into a patient’s body to assess and diagnose. A Magnetic Resonance Imaging technologist uses a strong magnetic field and radio waves to create images of the human body. Nuclear Medicine Technologists administer radioactive pharmaceuticals for the diagnosis and treatment of disease. Radiation Therapists provide simulations and daily treatments to assist cancer patients in managing their disease. Radiation Science Technologists work as part of a team in hospitals, diagnostic imaging centers, and clinics.