

Overview of Medical Specialties and Specialty Profiles

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Introduction: This document is organized in the following manner. It starts off with the specialty name, followed by a short description of the specialty, and then three bullet point facts and then personalized info/funny stereotype. An example is below. Note that not every specialty is covered here, there are many subspecialties you may pursue once you are interested in a specific specialty. More information is found on the last page of this document. Also, don't take the stereotypes so literally, I added those as a fun joke. I am extremely happy I chose to go into medicine, if done for the right reasons, you will find it is a very rewarding experience.

1. Medical Student

- a. Attends four years of medical school and then applies to a residency of their choice. Below is a breakdown of your schedule at Iowa.
 - i. First and second year are primarily lecture based learning where you review your science knowledge and learn human physiology.
 - ii. Second and third year you transition to clinical learning. You will do your core clerkships. Core clerkships are set clerkships that every student must rotate through in order to enhance their learning and become competent physicians.
 - iii. Third and fourth year are continuation of your clerkships, advanced clerkships, and interviews. These are clinical clerkships you get to choose primarily based on your interests and what you would like to practice as a doctor. For example, if you are interested in surgery but unsure of what kind, you can sign up to do orthopedics, urology, neurosurgery, etc.
Finally, you interview and match to your residency of choice.
- b. Fun fact: You will build close friendships and learn more than you ever thought possible. However, say goodbye to your dreams.



2. Allergy and Immunology

- a. An allergist-immunologist is trained in diseases involving the immune system. Examples include allergies, asthma, and adverse reactions to food, drugs, and other substances.
 - i. Total training after medical school is 5 years
 - ii. Average hours worked per week is about 49.3 hours
 - iii. Proficient knowledge of cell biology and human molecular physiology required.
- b. If you like details, molecular/cell biology, science, and can shrink your thinking down to a minuscule level, this might be a good fit for you. You will learn tons of molecular science jargon which will make you sound smart when you talk. Go to the store and walk down the allergy drug isle and become familiar with them because those drugs are now your new best friends.



3. Anatomic and Clinical Pathology

- a. A pathologist deals with the causes and nature of disease and contributes to treatment through knowledge gained by the laboratory evaluation of tissue/anatomic specimen. A pathologist uses information gathered from the microscopic examination of tissue specimens, cells, and body fluids to help make a diagnosis.
 - i. Total training after medical school is 4 years.
 - ii. Average hours worked per week is about 47.10 hours
 - iii. Top 5 most frequently encountered conditions are cancer and cancer related diseases as well as inflammatory diseases and gynecology screenings.
- b. If you like cell biology, pathology, enjoy working with and using equipment, and are more introverted, this might be a good specialty for you. A pathologist hardly ever interacts with patients. If you hate humans, scroll no further.



4. Anesthesiologist

- a. An anesthesiologist is trained to provide pain relief, maintenance, and restoration, of a stable condition during and immediately following an operation. It is the anesthesiologist's foremost purpose and concern to protect the patient's well-being and safety just prior to, during, and after surgery.
 - i. Total training after medical school is 4 years
 - ii. Average hours worked per week is about 61.00 hours
 - iii. Includes many subspecialties such as pain medicine, cardiothoracic, obstetric, and pediatric.
- b. If you like math, chemistry, and are analytical minded. This is a good specialty for you. Once the patient is asleep and stable. anesthesiologists sit down and scroll through social media through the duration of the surgery. So, if you love social media and spend endless hours on your phone, you might already be an anesthesiologist.



5. General Surgery:

- a. A general surgeon is trained to manage a broad spectrum of diseases and injuries affecting almost any area of the body that requires surgical intervention. They do not perform neurologic, orthopedic, thoracic, or urologic surgeries.
 - i. Total training after medical school is 5 years
 - ii. Average hours worked per week is about 59.40 hours
 - iii. Includes many subspecialties such as vascular, pediatric, trauma, colorectal, oncology, and an endless long list.
- b. If you have good hand-eye coordination, want variety, and would like to know how to do surgery on virtually any part of the human body, this is the specialty for you. If you also like to be out late and spend the in extravagant places, don't worry, you will be sleeping plenty at the hospital.



6. Dermatologist:

- a. A dermatologist is trained to diagnose and treat pediatric and adult patients with benign and malignant disorders of the skin, mouth, external genitalia, hair and nails, as well as a number of sexually transmitted diseases.
 - i. Total training after medical school is 4 years
 - ii. Average hours worked per week is about 45.40 hours
 - iii. Has one of the best work-life balances of any field, making it extremely competitive.
- b. If you want to perform a variety of procedures ranging from cosmetic to lifesaving (such as excising cancers) and you still want to be home early enough to hang out with sane people who did not go into medicine and work regular human hours at their job, this is the specialty for you. If you also spend an inordinate amount of time in front of the mirror, you my friend, are a dermatologist in the making.



7. Diagnostic Radiology:

- a. Radiology is a medical specialty in which a physician uses primarily image-based methods, such as x-rays, ultrasound, and CT scans, to diagnose and treat diseases. Radiology encompasses a variety of diagnostic and image guided techniques and radiologists can subspecialize in a number of areas (vascular, neuro, abdominal, nuclear, chest, and musculoskeletal imaging).
 - i. Total training after medical school is 5 years.
 - ii. Average hours worked per week is about 58.00 hours.
 - iii. Have unique visuospatial skills (able to take 2D images and extract information to apply it to 3D anatomy).
- b. Radiology is extremely versatile. You may see patients and perform procedures if you wish. You may not see patients and view imaging solely if you wish, or you can have anything in between. If you are a visual learner, are a technology wizard, and enjoy anatomy, this might be the specialty for you. Radiologists are responsible for thoroughly and completely reviewing the anatomy that is being presented on the screen in front of them, therefore, if you are meticulous when you work, you will enjoy this specialty. You will spend most of your time in a cold, dark, quiet room. Legend has it that the ghosts of past radiologists still lurk in those rooms, looking for premedical and medical students to haunt. :0



8. Emergency Medicine:

- a. Emergency medicine focuses on the immediate decision making and action necessary to prevent death or any further disability in a hospital or pre-hospital setting. It is a high-pressure, fast-paced, and diverse specialty; therefore, it requires a broad base of medical knowledge and a variety of well-honed clinical skills.
 - i. Total training after medical school is 3 years.
 - ii. Average hours worked per week is about 46.40 hours.
 - iii. This field is very attractive due to shift work. Which means you will work 12 hours shifts maybe 3 to 4 times in a row and then have the rest of the week off. Some even work multiple shifts in a row and then take multiple days off.
- b. Emergency medicine is unique in that you will see everything from the common cold to some extremely traumatic and life-threatening injuries. An emergency medicine physician must be able to make quick life-saving decisions and be calm under intense pressure. Once you have seen a patient and have stabilized them to the point that they are no longer in danger of death, you will send them to a different unit in the hospital to be looked after. Therefore, it is not uncommon for you to spend less than an hour or even less than half an hour with the patient. If you have a short attention span (such as that of a squirrel) or are an adrenaline junkie, EM is for you.



9. Family Medicine:

- a. Family medicine is concerned with the total health care of the individual and the family and is trained to diagnose and treat a wide variety of ailments in patients of all ages. A family medicine physician knows a little about every specialty. A jack-of-all trades but a master of none. You will establish long-term, almost life-long relationships with your patients, and you will arguably have the widest breadth of knowledge of any specialty (along with Internal Medicine)
 - i. Total training after medical school is 3 years
 - ii. Average hours worked per week is about 52.60 hours
 - iii. Family medicine physician are dwindling, therefore salary for physicians is projected to rise in this specialty. If you choose to work in a rural community or with a disadvantaged community/population, your loans can potentially be forgiven.
- b. If you want to perform a wide variety of procedures and know how to take care of virtually any ailment, this is a good specialty for you. Family medicine physicians will often refer to a specialist when the ailment is outside of their scope of practice (such as patient having a stroke or needing surgery/special attention). Many physicians go on to do fellowships such as in geriatrics (taking care of old people) or sports medicine (taking care of athletes). They also get trained in obstetrics and can deliver babies. It is arguably one of the most important specialties in medicine due to the focus on preventative medicine (preventing diseases in the general population before they happen i.e. diabetes, heart disease, asthma, etc.).



10. Internal Medicine:

- a. Internists are physicians who provide long-term, comprehensive care in the office and the hospital, managing both common and complex illnesses in adolescents, adults, and the elderly. Internists are trained in the diagnosis and treatment of cancer, infections, and diseases affecting the heart, blood, kidneys, joints, and digestive, respiratory and vascular system. When society generally thinks of doctors, they are thinking of internists. They are often the smartest and most well-rounded physicians due to the breadth of knowledge they (along with family medicine physicians) often carry.
 - i. Total training after medical school is 3 years (subspecializing adds more years)
 - ii. Average hours worked per week is about 54.90 hours
 - iii. Internal medicine has the widest breadth of subspecialties available. Many internal medicine physicians often go on to become cardiologists, hematologists, nephrologists, pulmonologists, oncologists, sports medicine physicians, gastroenterologists, etc.
- b. Everything said about family medicine can be echoed here. However, unlike family medicine, internal medicine physicians can subspecialize in almost any field of medicine. For example, if you decide during your internal medicine residency that you like the heart, or lungs, or kidney, or musculoskeletal system, or even critical care, you can receive more training and become an internist in that specialty. Internal medicine doctors are problem solvers and embody the physician identity. Similar to family medicine, I can't really crack any jokes here.



11. Neurological Surgery:

- a. A neurological surgeon provides the operative and non-operative management of disorders of the central, peripheral, and autonomic nervous systems, including their supporting structures and vascular supply. This means that neurosurgeons do what you think they do; perform surgery on the brain, spinal cord, and the structures of the body that support the brain and spinal cord such as tissues, nerves, and vessels.
 - i. Total training after medical school is 7 years
 - ii. Average hours worked per week is about 58.20 hours
 - iii. Neurosurgery is another very competitive specialty to match into but unlike dermatology, expect long hours but the work is very rewarding and often lifesaving.
- b. Go back and read the general surgery section. You will need good hand-eye coordination and an immaculate knowledge of anatomy. Not much room for mistakes when it comes to neurosurgery. Many neurosurgeons are also heavily involved in research as neurosurgery is a continuously expanding field with a lot of new knowledge constantly being discovered. If you choose neurosurgery, do me a favor, when you stand on the altar and say “I do” make sure it is to a picture of the brain and spinal cord.



12. Neurology:

- a. Neurology involves the treatment of disease or impaired function of the brain, spinal cord, peripheral nerves, muscles, and autonomic nervous system, as well as the blood vessels that relate to these structures. Essentially, neurologists manage the nonoperative part, whereas neurosurgeons manage mostly the operative part, of neurological diseases.
 - i. Total training after medical school is 4 years
 - ii. Average hours worked per week is about 50.80 hours
 - iii. Neurologists treat a wide scope of neurologic issues such as seizures, strokes, and peripheral neuropathies such as Charcot-Marie-Tooth disease (sound familiar?).
- b. Neurologist often work in the hospital setting as part of team. They are referred patients from other healthcare providers, and they are often on-call and ready to respond to an emergency, such as a patient presenting to the ER for a stroke. Once the ER physician has stabilized the patient, that patient is then transferred to the neurologist's care. If you are introverted and think cerebrally, you might just be a neurologist. Or if you weren't competitive enough for neurosurgery, then you might be a neurologist too.



13. Obstetrics and Gynecology:

- a. Obstetrics and gynecology is a diversified specialty concerned with the delivery of medical and surgical care to women. This field combines two specialties: obstetrics, which focuses on the care of women before, during, and after childbirth; and gynecology, which involves the diagnosis and treatment of disorders of the female reproductive system, breasts, and associated disorders.
 - i. Total training after medical school is 4 years
 - ii. Average hours worked per week is about 58.00 hours
 - iii. Relationships with patients are often long-term. Typical week for an Ob/Gyn doctor is three days of clinic where they see patients, and two days of conducting surgeries. Great for those who want a good mix of clinical and surgical practice.
- b. Not much to say other than if you enjoy female anatomy and childbirth, you've found your calling in Ob/Gyn. This is a great specialty for those interested in female reproductive rights and female/maternal healthcare. I just hope you don't mind bathing in human fluids from time to time!



14. Ophthalmology:

- a. Ophthalmology deals with the structure, function, diagnosis, and treatment of the eye and the visual system. This includes problems affecting the eye and its component structures, the eyelids, the orbit surrounding the eye, and the visual pathways that lead to the brain.
 - i. Total training after medical school is 3 years
 - ii. Average hours worked per week is about 51.00 hours
 - iii. Similar to Ob/Gyn, this is great specialty for those who want a good mix of clinical and surgical practice. Also has a great work-life balance.
- b. As an ophthalmologist you are an eye-surgeon. You will do everything from visual exams/prescribing glasses to doing eye surgery such as fixing cataracts in the eye. There's not much more than meets the eye when it comes to this specialty. What you see is what you get (puns intended) as your practice is limited to the eye and its supporting structures. Pretty cool research going on about blindness in this field in case anyone is interested.



15. Orthopedic Surgery:

- a. Orthopedic surgeons are trained in the preservation, investigation, and restoration of the extremities, spine, and associated structures by medical, surgical, and physical means. An orthopedic surgeon is involved with the care of a patient's musculoskeletal.
 - i. Total training after medical school is 5 years
 - ii. Average hours worked per week is about 57.00 hours
 - iii. Another extremely competitive specialty alongside dermatology, neurosurgery, and ophthalmology. Typical week consists of clinic days seeing patients and surgery days. Many surgeons work for academic centers or as part of a private practice group.
- b. This specialty has many opportunities to subspecialize such as reconstructive (think recreating limbs/joints), foot and ankle, hand, musculoskeletal oncology, sports medicine surgery, spine surgery, trauma surgery, and pediatric orthopedic surgery. Many orthopedists work on professional sports teams and are often on the sidelines in case of injury. Because of its inherent athletic culture, orthopedic surgeons are often regarded as “bros” or “jocks”. It has been a male dominated field but as of late, females and minorities have made huge gains in the field. So, if you're thinking about doing orthopedics, make sure to make connections early and get involved in research. Also make sure to use small, easy to understand sentences. Orthopedists are like muscles; they are all brawn and no brains, cool bro's and bra's?



16. Otolaryngology (Ear, Nose, and Throat Surgery):

- a. Otolaryngologists (ENT's) provide comprehensive medical and surgical care for patients of all ages with diseases and disorders that affect the ears, nose, throat, the respiratory and upper alimentary systems, and related structures of the head and neck.
 - i. Total training after medical school is 5 years
 - ii. Average hours worked per week is about 53.10 hours
 - iii. Another extremely competitive specialty alongside dermatology, neurosurgery, ophthalmology, and orthopedic surgery. Typical week is similar to ortho and other surgical specialties and consists of clinic days seeing patients and surgery days.
- b. This specialty is very versatile and unique. Many surgeons perform a wide variety of surgical procedures such as cosmetic facial reconstruction, surgery of benign and cancerous tumors of the head and neck, and treat allergic, sinus, laryngeal, thyroid, and esophageal disorders. With the exception of visual and eye-related disorders (the area of ophthalmologists) and lesions of the brain (managed by neurologists and neurosurgeons), otolaryngologists treat diseases and lesions above the shoulders. ENT's also generally tend to have a good work-life balance and are often artists/musicians by hobby. This is due to the intrinsic nature of ENT; a small surgical change often leads to a drastic physical change in a patient's appearance. Attention to detail is crucial.



17. Pediatrics:

- a. Pediatrics is primarily concerned with the physical, emotional, and social health of children from birth to young adulthood. A pediatrician deals with the biological, social, and environmental influences on the developing child and how these factors may impact disease or dysfunction on childhood development.
 - i. Total training after medical school is 3 years (more if you specialize)
 - ii. Average hours worked per week is about 47.00 hours
 - iii. Pediatrics is very similar to family medicine and internal medicine but geared specifically towards children. Refer to those specialties for more information but instead apply that knowledge solely to children.
- b. As stated, pediatrics is similar to family medicine and internal medicine except you are now treating children. You will have a wide breadth of knowledge regarding the various types of childhood diseases and how to manage them. Pediatrics, like internal medicine, also has many opportunities to further subspecialize. For example, if you are interested in the heart, or lungs, etc., you can go on to receive further training and become a pediatric cardiologist or pediatric pulmonologist, or pediatric “insert specialty of interest here” (you get the idea). Of note, due to the inherent nature of the specialty, pediatrics can be very rewarding when things go right and very distressing when things go wrong. I often get told that the hardest part of pediatrics, is having to deal with parents (even if the child is receiving great care, we know how parents can get).



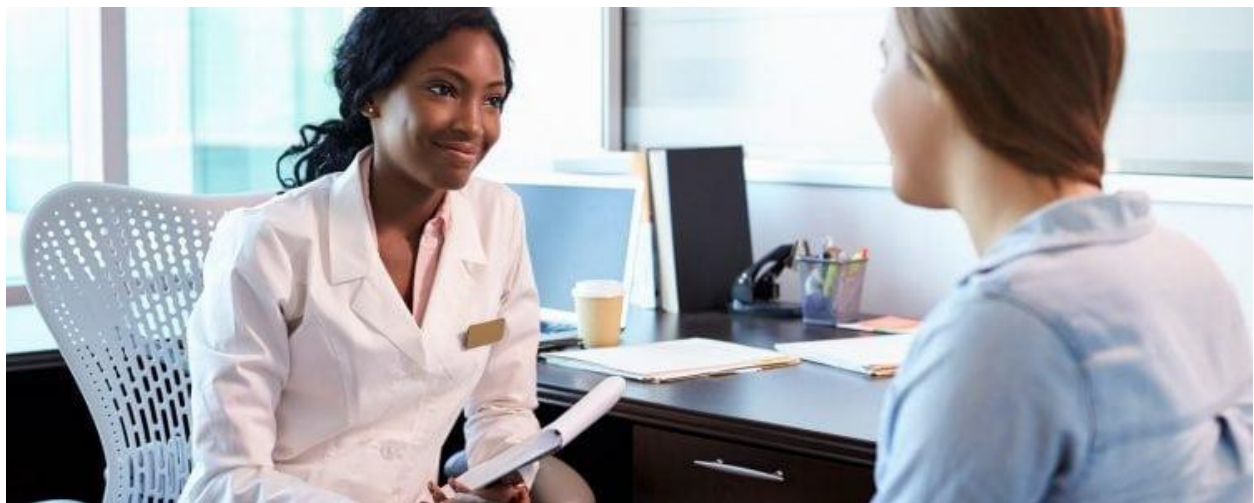
18. Plastic Surgery:

- a. A plastic surgeon deals with the repair, reconstruction, or replacement of physical defects of form or function involving the skin, musculoskeletal system, craniomaxillofacial (skull, jaw, face) structures, hand, extremities, breast and trunk, and external genitalia or cosmetic enhancement of these areas of the body. Cosmetic surgery is an essential component of plastic surgery.
 - i. Total training after medical school is 6 years
 - ii. Average hours worked per week is about 52.00 hours
 - iii. Plastic surgery often requires completion of a general surgery/other surgery specialty residency prior to starting 2 additional years of plastic surgery training.
- b. Plastic surgeons help restore both cosmetic and function to patients who have been severely traumatized (think burn victims) or patients who want to solely enhance their physique. I know what you are thinking, fast cars and that California lifestyle. Well only 10 years of additional schooling and \$500,000 of debt and it can all be yours! Just kidding, it is amazing what plastic surgeons can do. My own experience with plastics has been great. A group of plastic surgeons I was working with put together a patient who had suffered 3rd degree burns all over his body. He was a walking skeleton and they gave him a second chance at life.



19. Psychiatry:

- a. A psychiatrist specializes in the prevention, diagnosis, and treatment of mental, behavioral, addictive, and emotional disorders such as schizophrenia and other psychotic disorders, mood disorders, anxiety disorders, substance-related disorders, sexual and gender identity disorders, and adjustment disorders. They understand the biological, psychological, and social components of these illnesses.
 - i. Total training after medical school is 4 years
 - ii. Average hours worked per week is about 46.50 hours
 - iii. Psychiatrist often use a blend of therapy and pharmaceutical drugs to treat patients.
- b. Our society has become more educated on mental health issues and the stigma around mental health has lessened, this has caused a boom in the number of practicing psychiatrists. The field is growing and becoming more competitive each year. Think of psychiatrists as more than just “a doctor to talk to”. These physicians help their patients figure out the root of their mental health issues by using various forms of cognitive behavioral therapy and psychoanalyses. Moreover, psychiatrists use pharmacotherapy (drugs as therapy) to help their patients function and lead normal lives. You can either work on an outpatient bases (see patients in a clinic) or work on an inpatient hospital unit.



20. Urology:

- a. Urology focuses on the medical and surgical treatment of the male genital and urinary system, female urinary tract, and the adrenal gland. Urologists treat patients with kidney, ureter, bladder, prostate, urethra, and male genital structure disorders and injuries.
 - i. Total training after medical school is 5 years
 - ii. Average hours worked per week is about 58.10 hours
 - iii. A urologist is not a nephrologist. Whereas urologist treat conditions of the urinary tract (such as a tumor on the kidney). Nephrologist focus on the function of the kidney to ensure it is properly working (think of managing diabetes to ensure the kidney does not fail). Nephrology is a subspecialty of internal medicine. Urology is its own specialty and urologists are surgeons.
- b. Like other surgical specialties, urology is competitive and a typical week as a urologist is divided between seeing patients in the clinic and performing surgery. Furthermore, urologists see both male and female patients (so not the opposite of Ob/Gyn like many think). Urologists also may treat infertility and male sexual dysfunction issues. Again, like all surgical specialties, hand-eye coordination, dexterity, and excellent surgical skills are important. So, if you want to be a urologist, you better get used to the genitalia and sex jokes. They will be coming for you. (no pun intended).

