

## **What is a Medical Doctor?**

Medical Doctors (MDs) and Doctors of Osteopathic Medicine (DOs) are licensed healthcare professionals who diagnose and treat illness, prescribe medications, and perform medical procedures. They are trained in the medical model through extensive education that includes medical school and residency training. Unlike other healthcare providers, physicians are able to practice independently and can specialize in a wide range of fields such as primary care, surgery, pediatrics, and more. MDs are trained in allopathic (traditional) medicine, while DOs receive additional training in a holistic approach and osteopathic manipulative medicine (OMM).

The physician profession has evolved over centuries and remains one of the most essential roles in healthcare. There are currently over 1 million active physicians practicing in the United States. One key aspect of this profession is the ability to specialize in a specific area of medicine. Physicians can choose from a wide variety of specialties including family medicine, internal medicine, pediatrics, emergency medicine, psychiatry, surgery, obstetrics and gynecology, dermatology, cardiology, and many more. Each specialty focuses on different patient populations, conditions, and types of care, allowing physicians to tailor their careers to their interests and strengths.

After completing medical school, all physicians must complete residency training, which provides hands-on clinical experience in their chosen specialty. The length of residency varies depending on the field. Primary care specialties such as family medicine, internal medicine, and pediatrics typically require about 3 years of residency, while specialties like emergency medicine and obstetrics and gynecology usually require 3–4 years. Surgical specialties are often longer, with general surgery requiring about 5 years, and more specialized surgical fields such as neurosurgery or orthopedic surgery requiring 6–7 years or more.

Some physicians choose to pursue additional training after residency through fellowships. Fellowships allow physicians to subspecialize in a more focused area of medicine. For example, a physician who completes an internal medicine residency may go on to complete a fellowship in cardiology, gastroenterology, or oncology. Fellowships typically last between 1–3 years, depending on the specialty, and provide advanced training and expertise in a specific field.

To become a physician, students must earn a bachelor's degree and complete all required prerequisite coursework (usually with strong academic performance and a competitive GPA). Applicants must also gain clinical experience, participate in extracurricular activities such as research or volunteering, and take the Medical College Admission Test (MCAT). After acceptance, students attend medical school (4 years), followed by residency training (3–7+ years depending on specialty), and potentially fellowship training for further specialization. Physicians must also pass national licensing exams (such as the USMLE for MDs or COMLEX for DOs) in order to practice medicine.

## **Salary and Job Outlook**

The following statistics provide an overview of physician salary, education requirements, and job outlook in the United States based on recent data from the U.S. Bureau of Labor Statistics.

| Quick Facts: Physicians and Surgeons      |                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------|
| 2024 Median Pay ?                         | This wage is equal to or greater than \$239,200 per year or \$115.00 per hour. |
| Typical Entry-Level Education ?           | Doctoral or professional degree                                                |
| Work Experience in a Related Occupation ? | None                                                                           |
| On-the-job Training ?                     | Internship/residency                                                           |
| Number of Jobs, 2024 ?                    | 839,000                                                                        |
| Job Outlook, 2024–34 ?                    | 3% (As fast as average)                                                        |
| Employment Change, 2024–34 ?              | 24,300                                                                         |

The median annual salary for physicians is reported as \$239,200 or higher, reflecting the high level of education and training required for the profession. Physicians must complete a doctoral or professional degree, followed by extensive on-the-job training through residency programs. The job outlook is projected to grow by approximately 3%, which is considered average; however, demand remains strong due to an aging population and increased need for healthcare services. These statistics apply to both MD and DO physicians, as both follow similar training pathways and practice in the same roles.

While the median salary provides a general overview, physician income can vary significantly depending on specialty, as shown below.

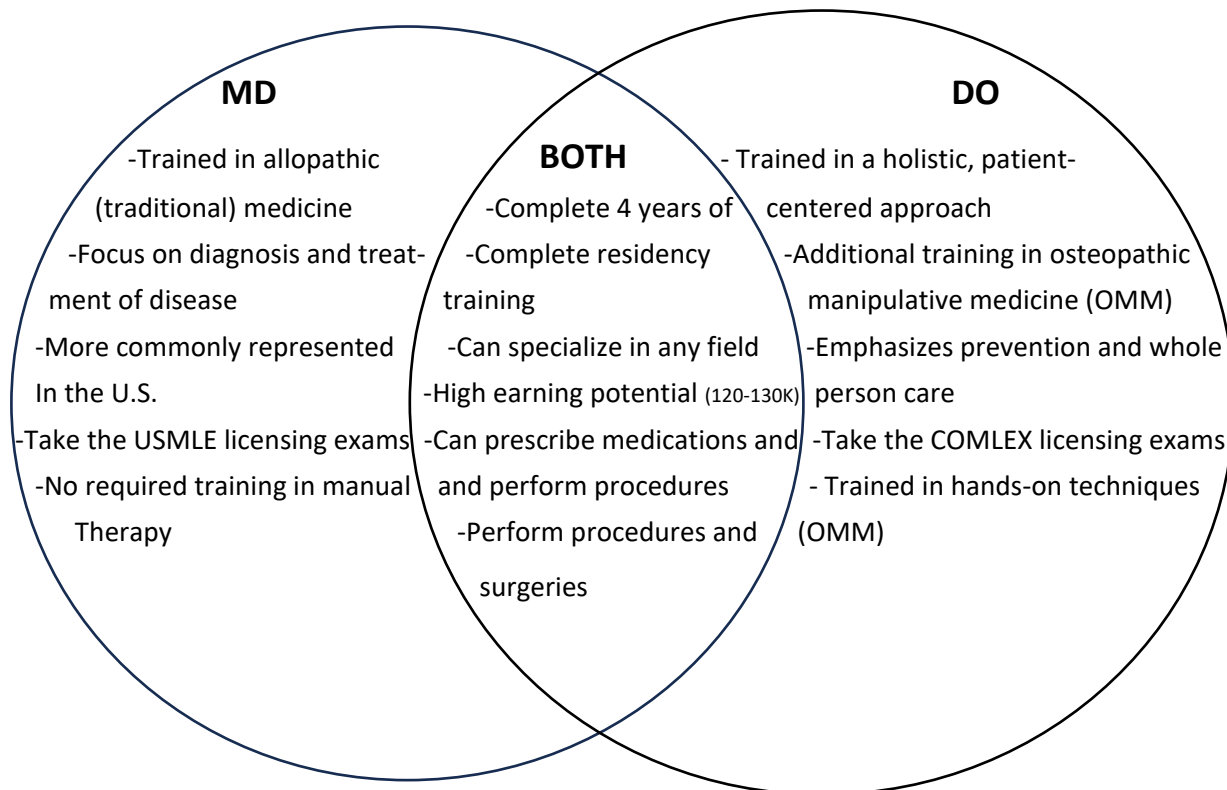
|                                       |           |
|---------------------------------------|-----------|
| Pediatric Surgeons                    | \$450,810 |
| Cardiologists                         | 432,490   |
| Surgeons, All Other                   | 371,280   |
| Orthopedic Surgeons, Except Pediatric | 365,060   |
| Radiologists                          | 359,820   |
| Dermatologists                        | 347,810   |
| Anesthesiologists                     | 336,640   |
| Emergency Medicine Physicians         | 320,700   |
| Ophthalmologists, Except Pediatric    | 301,500   |
| Neurologists                          | 286,310   |
| Obstetricians and Gynecologists       | 281,130   |
| Psychiatrists                         | 269,120   |
| Physicians, pathologists              | 266,020   |
| General internal medicine physicians  | 262,710   |
| Family medicine physicians            | 256,830   |
| Physicians, all other                 | 253,470   |
| Pediatricians, general                | 222,340   |

Physician salaries vary widely depending on specialty, with procedural and surgical fields generally earning higher incomes than primary care specialties. For example, pediatric surgeons and cardiologists are among the highest-paid specialties, while fields such as family medicine and pediatrics tend to have lower average salaries. This variation reflects differences in training length, workload, level of specialization, and demand within the healthcare system. Despite these differences, all specialties offer strong earning potential and job stability.

Additionally, many higher-paying specialties require longer residency training and may involve fellowship training for further specialization.

## MD vs DO

Doctors are categorized in two categories, MDs and DOs, below is a chart comparing the two:



## Education & Requirements to Become a Physician Associate

### Step 1: Pick a Major

During undergraduate study, students may major in any discipline provided they complete the required prerequisite coursework for medical school. Science-based majors often incorporate many of the common prerequisites into their curriculum, which can simplify academic planning, but they are not required.

Each medical school establishes its own prerequisite requirements and minimum grade standards. Most schools expect strong academic performance, typically with a minimum GPA around 3.0, though competitive applicants often have significantly higher GPAs. Because requirements vary, students should research potential programs early and begin developing a list of target schools by their sophomore year.

At Salisbury University, students interested in medical school often follow a pre-med track while majoring in fields such as Biology, Chemistry, Health Science, or Medical Laboratory Science. Below are common medical school prerequisites along with their corresponding Salisbury course names:

| <b>Courses</b>                         | <b>Salisbury equivalent</b>                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------|
| General Bio w/ lab (2 semesters)       | BIOL 201 and BIOL 202                                                                                 |
| General Chemistry w/ lab (2 semesters) | CHEM 121 and CHEM 122                                                                                 |
| Organic Chemistry w/ lab               | CHEM 221                                                                                              |
| Biochemistry                           | CHEM 417                                                                                              |
| Physics I & II w/ lab                  | PHYS 121 (algebra based) or PHYS 221 (calc based) & PHYS 123 (algebra based) or PHYS 223 (calc based) |
| Statistics                             | MATH 155                                                                                              |
| English                                | ENGL 103                                                                                              |
| Psychology                             | PSYC 101                                                                                              |
| Sociology                              | SOCI 101                                                                                              |
| <b>Recommended Courses</b>             |                                                                                                       |
| Organic Chemistry II                   | CHEM 222                                                                                              |
| Genetics                               | BIOL 360 or BIOL 370                                                                                  |
| Anatomy & Physiology I & II            | BIOL 215 and BIOL 216                                                                                 |
| Cell Biology                           | BIOL 350                                                                                              |

*\* Prerequisite requirements vary by program; schools may require some, all, or additional courses beyond those listed.*

*Regarding GPA, students should also be aware that centralized application systems may calculate GPA differently than their undergraduate institution (e.g., repeated courses may not replace previous grades).*

## **Step 2: Gain Clinical experience and Extracurricular Involvement**

Medical schools do not require a specific number of direct patient care hours like PA programs; however, they expect applicants to demonstrate meaningful exposure to healthcare and a strong commitment to service.

Students should aim to gain clinical experience through activities such as:

- Physician shadowing
- Hospital or clinic volunteering (such as TidalHealth Peninsula Regional)
- Medical scribing
- EMT or CNA work (optional but beneficial)

In addition to clinical exposure, competitive applicants often participate in:

- Research (especially for more competitive programs)
- Leadership roles
- Community service
- Campus organizations

At Salisbury University, students have access to **over 100 student organizations** that provide opportunities for leadership, service, and professional development . Students can strengthen their applications by getting involved in organizations such as:

- **Health Professional Advisory Program (HPAP)** – offers guest speakers, application guidance, and networking opportunities
- **Medical Careers Society** – provides exposure to healthcare careers and preparation for professional school
- **American Society for Biochemistry and Molecular Biology (ASBMB)** – supports research engagement and scientific discussion
- **Biology Club / Bioenvirons Club** – promotes academic involvement and environmental/health awareness
- **Women in STEM Club** – provides networking, mentorship, and career development opportunities
- **Student Government Association (SGA)** – develops leadership, communication, and organizational skills across campus organizations
- **Social Work Student Association or service-based organizations** – provide hands-on community service and advocacy experience

Students are also encouraged to explore additional organizations through Salisbury's **Involved@SU platform**, which allows students to browse and join clubs, track involvement, and participate in campus events .

Students should also pursue **research opportunities with faculty**, particularly within the Biology and Chemistry departments. Opportunities may include:

- Independent or faculty-mentored undergraduate research
- Summer research programs
- Presenting at student research conferences

Research experience helps students develop critical thinking, problem-solving skills, and a deeper understanding of scientific inquiry, all of which are highly valued by medical schools.

Students may also pursue leadership positions within these organizations, such as executive board roles, committee chairs, or event coordinators. These roles demonstrate initiative, responsibility, and teamwork—qualities that are essential for future physicians.

Many medical schools also expect applicants to have shadowing experience with physicians (MD or DO), typically ranging from 50–100 hours. These experiences help students better understand the profession and confirm their interest in becoming a physician.

Students should begin building these experiences early and continue them throughout their undergraduate career. Strong, consistent involvement is more valuable than short-term participation in many activities.

### **Step 3: Standardized Exam (MCAT)**

Most medical schools require applicants to take the Medical College Admission Test (MCAT), a standardized exam that assesses a student's readiness for medical school.

The MCAT evaluates knowledge and critical thinking skills across four main sections:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems

- Psychological, Social, and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills (CARS)

Students typically take the MCAT during their junior year or early senior year, prior to submitting their application. Taking the exam early allows time for adequate preparation and the opportunity to retake the exam if necessary.

Because the MCAT covers a wide range of topics, students should complete most prerequisite coursework—such as biology, chemistry, physics, psychology, and biochemistry—before taking the exam.

While minimum score requirements vary by medical school, competitive applicants often aim for a score of **510 or higher**. Strong MCAT performance is a critical component of a competitive application and can significantly impact admission decisions.

Preparation for the MCAT often requires several months of dedicated study. Many students utilize study resources such as review books, practice exams, and prep courses. Developing a structured study plan and consistently practicing exam-style questions can improve performance.

#### **Step 4: Letters of recommendation**

Most medical schools require 3–5 letters of recommendation as part of the application process. These letters provide admissions committees with insight into an applicant’s academic ability, character, work ethic, and readiness for the rigor of medical school.

Many medical schools prefer letters from:

- Science professors (biology, chemistry, physics)
- A physician (MD or DO)
- Research mentors (if applicable)
- Academic advisors or other faculty members

It is important for students to build strong relationships with faculty and supervisors early in their undergraduate education. Professors and mentors are more likely to write detailed and supportive letters if they know the student well and can speak to their strengths.

Students should also be proactive in requesting letters well in advance of application deadlines and provide recommenders with relevant materials such as resumes, personal statements, and a summary of experiences to assist in writing strong letters.

Strong letters of recommendation can significantly strengthen an application by highlighting qualities such as professionalism, communication skills, leadership, and commitment to the field of medicine.

#### **Step 5: Applying to Medical School**

Most medical schools participate in centralized application systems:

- **AMCAS** (for MD programs)
- **AACOMAS** (for DO programs)

These application systems allow students to submit one primary application that can be sent to multiple medical schools.

Through these platforms, applicants must submit:

- Official transcripts from all colleges attended
- MCAT scores
- Letters of recommendation
- Personal statement
- Activities and experiences section

The personal statement is a critical component of the application and allows students to explain their motivation for pursuing a career in medicine, as well as highlight meaningful experiences that have shaped their journey.

After submitting the primary application, many medical schools require **secondary applications**, which often include additional essays and application fees. These essays typically focus on a student's experiences, values, and fit for a specific program.

Application cycles typically open in late spring (May), and many medical schools use **rolling admissions**, meaning applications are reviewed as they are received. Because of this, applying early in the cycle can significantly improve an applicant's chances of receiving an interview.

The application process is highly detailed and time-intensive. Students are encouraged to begin preparing early by tracking their experiences, drafting their personal statement, and requesting letters of recommendation well before the application cycle opens.

Strong applicants ensure that all components of their application—academics, experiences, and written materials—are well-developed and submitted in a timely manner.

## How Competitive is Medical School?

Admission to medical school is highly competitive. Each year, thousands of applicants compete for a limited number of seats, with many medical schools receiving far more applications than they can accept.

While schools publish minimum admission requirements, successful applicants often exceed these benchmarks. Competitive candidates typically demonstrate:

- Strong academic performance (GPA typically around 3.6–3.8 or higher)
- Competitive MCAT scores (often 510 or higher)
- Meaningful clinical experience and exposure to healthcare
- Research experience (especially for more competitive programs)
- Leadership roles and extracurricular involvement
- Strong letters of recommendation
- A clear and well-developed motivation for pursuing medicine

Medical schools use a **holistic review process**, meaning they evaluate applicants based on more than just grades and test scores. Admissions committees consider personal qualities such as communication skills, professionalism, resilience, and commitment to service.

It is also important to recognize the strength of the applicant pool. Many applicants have extensive experience in research, clinical settings, and leadership roles. As a result, meeting minimum requirements does not guarantee admission.

Students should approach the pre-med pathway with long-term planning, academic discipline, and realistic expectations about the level of competition involved.

## Alternative Pathways: Gap Years and Post-Baccalaureate Programs

Many students choose to take one or more **gap years** before applying to medical school in order to strengthen their application and gain additional experience. Gap years can be used to improve academic performance, gain more clinical exposure, participate in research, increase community service involvement, or prepare for the MCAT.

Common activities during a gap year include:

- Medical scribing or clinical work
- Research assistant positions
- Volunteer or service programs
- MCAT preparation and retesting
- Additional shadowing experience
- Leadership and community outreach roles

For students who need to improve their academic record, **post-baccalaureate (post-bacc) programs** can be an excellent option. These programs are designed for students who either need to complete prerequisite coursework or improve their science GPA before applying to medical school.

There are two common types of post-bacc programs:

- **Career changer post-bacc programs** – for students who did not complete the required pre-med coursework during undergraduate study
- **Academic enhancer post-bacc programs** – for students who need to strengthen their GPA and demonstrate improved academic readiness

Some students may also pursue a **Special Master's Program (SMP)**, which offers graduate-level biomedical coursework and can further strengthen an application for medical school.

Gap years and post-bacc pathways are common and can significantly improve an applicant's competitiveness. Taking additional time to strengthen academics and experiences can lead to a more successful application cycle.

## Potential Barriers to Admission

In addition to academic and extracurricular requirements, there are several factors that may impact a student's ability to gain admission to medical school and successfully complete the training process.



Academic Performance

Medical schools place a strong emphasis on academic performance. A low GPA or MCAT score can significantly limit admission opportunities. While improvement over time can strengthen an application, consistent academic success is important to demonstrate readiness for the rigor of medical school.

Time commitment

The path to becoming a physician requires a significant time commitment. Students must complete a bachelor’s degree (4 years), medical school (4 years), and residency training (3–7+ years depending on specialty). Some physicians also complete fellowship training for further specialization. This extended timeline can be a barrier for students who are not prepared for a long-term educational commitment.

Financial Cost

Medical school can be expensive, often resulting in substantial student loan debt. In addition to tuition, students must consider costs associated with applications, standardized exams, and living expenses during medical school, when working is often limited.

Clinical and Extracurricular Expectations

Medical schools expect applicants to have meaningful clinical experience, research involvement, and community service. Students who do not plan ahead may struggle to build a competitive application in time for the application cycle.

Burnout and Stress

The journey to becoming a physician is academically and emotionally demanding. Students may experience stress, burnout, and pressure throughout undergraduate studies, medical school, and residency training. Developing strong time management skills and maintaining personal well-being is essential.

Background Checks and Professional Standards

Medical schools and residency programs often require criminal background checks and drug screening. Certain legal or professional issues may impact a student’s ability to gain admission, participate in clinical rotations, or obtain medical licensure.

Medical Schools Nearby and Their Requirements

Below are examples of medical schools in Maryland and surrounding regions, along with general admission statistics and key characteristics of each program. Students should be aware that admission requirements vary by school and may change each year.

| Medical School                                              | Location         | Degree | Avg GPA | Avg MCAT | Notable Requirements                                           |
|-------------------------------------------------------------|------------------|--------|---------|----------|----------------------------------------------------------------|
| University of Maryland School of Medicine                   | Baltimore, MD    | MD     | ~3.8    | ~512     | Strong clinical experience, service focus, research encouraged |
| Johns Hopkins School of Medicine                            | Baltimore, MD    | MD     | ~3.9    | ~520     | Heavy research focus, extremely competitive                    |
| Uniformed Services University of the Health Sciences        | Bethesda, MD     | MD     | ~3.6    | ~510     | Military commitment required, tuition covered                  |
| Meritus School of Osteopathic Medicine                      | Hagerstown, MD   | DO     | ~3.5    | ~505     | Focus on primary care and regional physician shortages         |
| Georgetown University School of Medicine                    | Washington, DC   | MD     | ~3.7    | ~512     | Service-oriented, Jesuit mission, holistic review              |
| George Washington University School of Medicine             | Washington, DC   | MD     | ~3.7    | ~511     | Strong emphasis on community service and clinical exposure     |
| Sidney Kimmel Medical College (Thomas Jefferson University) | Philadelphia, PA | MD     | ~3.7    | ~513     | Large program, strong clinical training                        |
| Temple University Lewis Katz School of Medicine             | Philadelphia, PA | MD     | ~3.6    | ~512     | Focus on urban health and community service                    |

While GPA and MCAT scores are important factors in the admissions process, medical schools evaluate applicants holistically. This means they also consider clinical experience, research involvement, leadership, community service, and personal characteristics. Students are encouraged to research each program individually to ensure they meet all specific requirements and align with the school's mission and values

## Student Resources

Below is a list of websites and resources for students to explore when learning more about medical school, the application process, and career pathways in medicine:

- Association of American Medical Colleges  
<https://students-residents.aamc.org/>  
Provides information on medical school admissions, the MCAT, application resources, and career planning.
- American Association of Colleges of Osteopathic Medicine  
<https://www.aacom.org/>  
Offers resources for students interested in osteopathic medicine, including application guidance and school information.
- Salisbury University Health Professions Advising Program  
<https://www.salisbury.edu/academic-offices/advising-center/hpap/>  
Provides advising, application support, and resources specifically for Salisbury University students pursuing healthcare careers.
- Khan Academy – MCAT Prep  
<https://www.khanacademy.org/test-prep/mcat>  
Provides free MCAT preparation materials, including videos, practice questions, and content review across all tested subjects.
- Choose DO Explorer  
<https://choosedo.org/explorer/>  
A tool for researching osteopathic (DO) medical schools, including program details and requirements.