

# A PRIMER ON GRADUATE MEDICAL EDUCATION

Congratulations! You are on your way to becoming a Doctor of Osteopathic Medicine. The Michigan Association of Osteopathic Directors and Medical Educators and the Statewide Campus System has provided this reference to guide you along this journey.

The information presented here represents the most up-to-date material available; however, graduate medical education continues to evolve, and as such, this information is subject to change.

## Your undergraduate years

The journey to becoming an osteopathic physician begins at one of the twenty accredited colleges of osteopathic medicine (COM). Traditionally, following a four-year curriculum incorporating basic sciences, clinical skills and osteopathic concepts, the degree of Doctor of Osteopathic Medicine (D.O.) is conferred. Many COMs also offer dual programs leading to Masters or Ph.D. degrees, as well as pre-doctoral fellowships in osteopathic manipulative medicine, which may extend the undergraduate years.

While curricula vary among COMs, the first two years are typically spent on campus in basic science and introductory clinical coursework. In the third and fourth years, the focus shifts to clinical experience in hospitals and ambulatory care settings (clinics and private physician offices). A variety of terms are used to describe these two years, and may vary by region. “Externship” broadly encompasses this two-year period. “Clerkships” or “rotations” typically refer to specific blocks of time spent in certain specialties (e.g., a one-month clerkship in pediatrics). Some osteopathic medical students will be assigned to a “base hospital” where most of their clerkships are taken; rotations elsewhere are referred to as “out-rotations”. Each COM has core rotation requirements for the third and fourth year, which are complemented by “selectives” (rotations chosen from within a specified discipline) and “electives” (rotations taken in an area of interest).

Once the academic requirements are completed, the osteopathic medical student graduates and becomes a DO. At this point, you are a physician! However, there are other requirements to be met before you are able to fully practice medicine.

## Postdoctoral training

After you receive your degree, you enter the postdoctoral portion of your education, which may include internship, residency, and fellowship. These programs encompass graduate medical education (GME). The AOA provides information about osteopathic internship and residency programs on its online Opportunities website: [www.aoa-net.org](http://www.aoa-net.org). The Statewide Campus System provides information about Michigan programs on its website: [www.com.msu.edu/scs](http://www.com.msu.edu/scs).

### Internship

Internship is the first year of training after completing osteopathic medical school. An osteopathic internship is REQUIRED to:

- Enter an osteopathic residency
- Apply for board eligibility and certification through the AOA
- Obtain a license to practice in Florida, Michigan, Oklahoma, Pennsylvania, and West Virginia

The American Osteopathic Association currently approves four types of internships:

- **Traditional rotating internship (TRI):** a well-rounded educational experience that serves to prepare DOs to enter residency training. The TRI fulfills the requirements for individuals seeking osteopathic residencies or those pursuing allopathic residencies who must complete an osteopathic internship for state licensure. The TRI is also an option for those graduates who desire a broad-based internship, as well as those undecided about their career path. While it is not the equivalent of an Accreditation Council on Graduate Medical Education (ACGME) transitional year, in many specialties it may count toward allopathic residency credit.

- **Specialty track internship:** incorporates a specialized curriculum and confers one year of credit to subsequent residency training in that field. Track internships are available in internal medicine, obstetrics and gynecology, otolaryngology/facial plastic surgery, pediatrics, and urological surgery.
- **Specialty emphasis internship:** also incorporates a curriculum geared toward a specialty, but does not reduce the length of subsequent residency training. Specialty emphasis internships are available in anesthesiology, emergency medicine, family practice, psychiatry, radiology, and general surgery.

### Residency

Residency training is focused on a particular specialty, e.g., general surgery or emergency medicine. In osteopathic postgraduate training, residency begins in the second postgraduate year (PGY-2). The duration of each residency program varies by specialty (see Table 1). A track internship is available in certain specialties and counts toward one year of residency training.

**Table 1: Osteopathic Residency**

Specialty	Type of AOA Internship Required	Residency Years After Internship
Anesthesiology	Anesthesiology emphasis or other	3
Dermatology	TRI*	3
Diagnostic Radiology	Diagnostic Radiology emphasis or other	4
Emergency Medicine	Emergency Medicine emphasis or other	3
Family Medicine	Family Medicine emphasis or other	2
General Surgery	General Surgery emphasis or TRI	4
Internal Medicine	Internal Medicine track**	2
Internal Medicine-Emergency Medicine	TRI or Internal Medicine track	4
Neurology	TRI*	3
Obstetrics and Gynecology	Obstetrics and Gynecology track**	3
Ophthalmology	TRI	3
Orthopedic Surgery	TRI	4
Otolaryngology/Facial Plastic Surgery	OTO/FPS track**	4
Pediatrics	Pediatrics track**	2
Physical Medicine and Rehabilitation	TRI*	3
Preventive-Occupational-Environmental Medicine	TRI*	2
Psychiatry	Psychiatry emphasis or TRI	3
Urology	Urology track**	5 (PGY-2 in general surgery)

\* TRI: traditional rotating internship. Other internships may also meet requirements

- of residency program.
- \*\* other internships may provide partial credit toward residency requirements

### **Fellowship**

A fellowship refers to additional training taken in a subspecialty after completion of a residency. For example, following a family medicine residency, fellowships may be taken in geriatrics or sports medicine. An orthopedic resident may go on to a fellowship in spine or hand surgery.

### **Funding of graduate medical education**

Teaching hospitals receive funding from the federal government through the Medicare and the state Medicaid systems to help defray the cost of training interns and residents. These costs may be “direct” e.g., salary and benefits, or “indirect” e.g., administrative support, increased use of supplies and other hospital resources.

The federal government imposes time restrictions on GME funds based on your initial choice of a postdoctoral program. For example, if you select family medicine, your training hospital is eligible to receive full reimbursement for the three years it takes you to complete the program. If you change residencies after the second year, you have one year of eligibility remaining that can be applied to your new specialty choice. Hospitals may be reluctant to accept you if the residency takes more than one year to complete because they will not receive full reimbursement for your training.

Another limitation was placed on teaching hospitals in 1997, when the Balanced Budget Act capped the number of GME positions at 1996 levels. Hospitals receive reimbursement up to that cap number, which influences the type and distribution of positions offered.

### **Licensure**

All practicing physicians are required to be licensed by their state. Prior to beginning your internship, you must apply for an educational license which permits you to provide patient care in your base institution and affiliated sites. While an educational license is sufficient for all levels of graduate medical education, it does not allow you to practice outside your training program or “moonlight”. A full state license is required for any practice outside your GME program, and may be obtained after one to two years of graduate medical education, depending on state regulations and following successful completion of your licensing examinations.

### **Matching for postdoctoral training**

#### **AOA Match**

The American Osteopathic Association sponsors an annual national match for all osteopathic internships and some residencies. The AOA match is administered by the National Matching Service. Participation in the match is required to obtain an osteopathic training approval.

In 2000, the AOA added an option of a combined (or “linked”) internship and residency. This option allows 4<sup>th</sup>-year students to match not only for their internship but also for the subsequent years of residency training in the specialty of their choice. Unless academic or disciplinary problems preclude advancement, the intern is assured of a PGY-2 position. This multi-year commitment may be dissolved upon the mutual agreement of the intern and the training institution.

Osteopathic medical students receive registration forms for the Match in the fall of their fourth year. During the late summer and early fall of the year prior to graduation, students submit applications to the hospitals where they are interested in training. Applicants may be invited to interview for internship, and possibly also for residency programs if they are seeking a linked position. The following January, each hospital and each applicant submit “rank order lists” indicating their top selections. The Match results are announced in early February.

#### **NRMP Match**

The National Resident Matching Program (NRMP) administers the match for ACGME-approved residencies and fellowships. Current regulations forbid osteopathic medical students from participating simultaneously in the AOA Match

and the NRMP for programs that start in the same academic year. It is permissible to enter the AOA match for PGY-1 training and the NRMP for PGY-2 training.

## Board examinations

Board examinations fall broadly into two categories: those required for obtaining a license to practice medicine and those required to obtain specialty certification. Licensure is granted by individual states and is mandatory in order to practice medicine. Board certification has historically been a desirable credential. Current expectations are that hospitals, health maintenance organizations and insurers require physicians to become board certified. Successful completion of periodic recertification examinations is also required to maintain this status.

### COMLEX

The Comprehensive Osteopathic Medical Licensing Examination (COMLEX) is a three-part examination taken by osteopathic physicians for licensure (see Table 2). It is administered by the National Board of Osteopathic Medical Examiners (NBOME). All osteopathic postgraduate training programs accept COMLEX. Keep in mind that in Florida, Michigan, Oklahoma, Pennsylvania, and West Virginia, an osteopathic internship is required for licensure, and that COMLEX is required for the osteopathic internship.

Each level of COMLEX must be passed to be eligible for the next level; all levels must be passed within seven years of the first examination.

Most hospitals require successful completion of Level 3 prior to acceptance into residency positions. In addition, Level 3 is required to be eligible for full licensure in a state.

**Table 2. COMLEX Examination**

COMLEX Level	Taken during:	Focus
Level 1	2 <sup>nd</sup> year of medical school	Basic sciences and disease mechanisms
Level 2	3 <sup>rd</sup> or 4 <sup>th</sup> year of medical school	Clinical assessment
Level 3	Internship year	Patient management

### USMLE

The United States Medical Licensing Examination (USMLE) is also a three-part examination for licensure. It is taken by students and graduates of allopathic (MD) medical schools. Osteopathic medical students and interns are also eligible to sit for the USMLE exams. Like COMLEX, parts 1 and 2 are taken during medical school and part 3 is completed during the first postgraduate year (PGY-1). The focus of each part is similar to COMLEX. The USMLE is administered by the National Board of Medical Examiners and the Federation of State Medical Boards. Some highly competitive allopathic residencies utilize these results in screening applicants. Osteopathic medical students interested in such programs may wish to consider taking the USMLE.

### Specialty College and Certifying Boards

Specialty colleges and certifying boards exist in the osteopathic and allopathic worlds for a wide variety of medical and surgical fields. In addition to other services, specialty colleges develop academic requirements and standards for residency training programs within their discipline. Certifying boards are affiliated but distinct organizations that define criteria for “board eligibility”, and design and administer examinations for board certification.

## Glossary and resources

**AOA**            [American Osteopathic Association](http://www.aoa-net.org). Represents DOs in this country and oversees many affiliated specialty colleges and councils. Approves and accredits osteopathic internship and residency programs. [www.aoa-net.org](http://www.aoa-net.org)

<b>ACGME</b>	<u>Accreditation Council of Graduate Medical Education.</u> Approves and accredits allopathic residency programs. <a href="http://www.acgme.org">www.acgme.org</a>
<b>COMLEX</b>	<u>Comprehensive Osteopathic Medical Licensing Examination.</u> A three-part examination taken by osteopathic physicians for licensure. <a href="http://www.nbome.org">www.nbome.org</a>
<b>GME</b>	<u>Graduate medical education.</u> Refers to training after medical school, including internship, residency and fellowship.
<b>NBOME</b>	<u>National Board of Osteopathic Medical Education.</u> Administers COMLEX licensure board examinations for osteopathic physicians. <a href="http://www.nbome.org">www.nbome.org</a>
<b>NMS</b>	<u>National Matching Service.</u> The company which administers the AOA and NRMP Match. Details and important dates are available on their website. <a href="http://www.natmatch.com/aoairp/">www.natmatch.com/aoairp/</a>
<b>NRMP</b>	<u>National Resident Matching Program.</u> Allopathic residency match program. <a href="http://www.nrmp.org">www.nrmp.org</a>
<b>OPTI</b>	<u>Osteopathic Postgraduate Training Institution.</u> Each osteopathic postdoctoral program must participate in an OPTI. These are consortia of member hospitals and at least one COM. For more information: <a href="http://www.aoanet.org/PostDoc/optiabout.htm">www.aoanet.org/PostDoc/optiabout.htm</a>
<b>PGY</b>	<u>Postgraduate year.</u> Refers to the year in training following graduation (e.g. PGY-1 is the first postgraduate year). In osteopathic programs, may also be referred to as <b>OGME</b> (osteopathic graduate medical education) year.
<b>SCS</b>	<u>Statewide Campus System.</u> This is the Michigan OPTI, and includes Michigan State University College of Osteopathic Medicine and member hospitals. Formerly known as COGMET (Consortium of Osteopathic Graduate Medical Education and Training). <a href="http://www.com.msu.edu/scs">www.com.msu.edu/scs</a>
<b>USMLE</b>	<u>United States Medical Licensing Examination.</u> Three-part licensing examination for MDs and DOs. <a href="http://www.usmle.org">www.usmle.org</a>

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**MICHIGAN ASSOCIATION OF OSTEOPATHIC DIRECTORS AND MEDICAL EDUCATORS  
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