
SCOPE OF PRACTICE OF
HEALTH PROFESSIONALS

IN THE STATE OF MICHIGAN

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INTRODUCTION

Every day health professionals are entrusted with people's health care and, consequently, their lives. Society does not bequeath this responsibility lightly; it comes with the reasonable condition that health care providers, who are the subjects of this trust, abide by stringent professional, ethical, and legal standards.

Attending to human health is a complex and difficult task. It is no surprise, therefore, that the regulations imposed on health professionals also are highly complex and difficult to understand. This document attempts to clarify the extent of and differences between those regulations as they apply to people who work in various licensed¹ health care fields in the state of Michigan: allopathic and osteopathic medicine (particularly family medicine, anesthesiology, ophthalmology, obstetrics-gynecology, and psychiatry); physician assistance; nursing (comprised of licensed practical, registered, and advanced practice nurses); optometry; chiropractic; and psychology.² (To ensure clarity, when discussing two health professionals from similar fields, e.g., optometrists and ophthalmologists in the field of eye care, the paper indicates in parentheses which is the physician.)

One of the primary obstacles in trying to understand the differences between the described health professions is the variation in language

¹Licensure is the process by which an agency of the state government grants permission to people who meet predetermined minimal competencies (e.g., educational attainment, clinical training, and passing scores on examinations) to engage in the practice of the profession and/or use particular titles.

²Not all health professionals are licensed under Michigan law: Some, such as respiratory therapists, may perform their duties without having to meet any legally specified education or training requirements. There is a move in Michigan to establish registration criteria—such as those which exist for sanitarians and occupational therapists—for otherwise unregulated health professionals. Registration is a voluntary process by which people are assessed and given status on a registry attesting to their ability and current competency (e.g., based on test scores or completion of coursework). According to current Michigan law, it still is legal for certain health care professionals who are not registered to practice their professions, but they must compete for jobs and salary with those who are registered and can prove they have met certain standards.



and degree of detail used by policymakers and professional societies to define each. To address this problem, the “Defining Health Professions” section of this publication provides definitions—based on those in the law, academic papers, and the texts of professional societies—that translate complex language into language that is easy to understand. In the section, “Scope of Practice and Limitations,” which follows “Defining Health Professionals,” the document presents a detailed discussion of the various health professions, explaining the different providers’ scopes of practice. The subsequent section, “Delegation and Supervision,” describes the different providers’ authority to delegate and supervise, and the final section, “Education, Training, and Examination,” discusses the education, training, and licensure requirements for the different health professionals. Practical examples presented throughout the discussion are meant to further illuminate the providers’ duties, responsibilities, and tasks. We hope this helps the reader to compare more easily the similarities and differences between health professions. In all cases, we strive to make objective comparisons.

This document limits discussion only to health care professions licensed by the State of Michigan. Information gathered for the purpose of these comparisons came from multiple sources, including public statute and rules; articles, journals, and other materials from professional societies and academia; and surveys and interviews of health professionals.



THE REGULATORY SYSTEM

While federal programs and/or regulations can influence health professionals in their practice or employment setting (e.g., through Medicare and Medicaid funding requirements), health professional regulation is the domain of state government. Not surprisingly, this has meant that health professionals in different states are regulated differently. Despite this fact, the primary regulatory agents and mechanisms employed by states are the same.

Two systems are used to regulate health professionals: the legal system and the professional/voluntary system. The main agents of the *legal* regulatory system in Michigan are

- the legislative branch, which creates and amends statutes;³
- the executive branch (especially the Michigan Department of Consumer and Industry Services and its health professional boards), which promulgates rules and provides administrative and support services for licensing health professionals (e.g., mailing licenses and collecting fees or investigating questionable activities); and
- the judicial branch, which renders opinions concerning the application of statutes and rules.

The main agents of the professional regulatory system are professional societies such as the American Osteopathic Association, which help define, defend, and sometimes refine health professionals' scope and standards of practice, including policies, procedures, and protocols to which health professionals should adhere. These professional societies also accredit educational and training programs, establish guidelines for health professional education, certify people in general and specialty practice,⁴ and set many quality assurance standards, including examination of health professionals.

³The primary statute governing Michigan's health professionals is the Michigan Public Health Code—Public Act 368 of 1978—as amended.

⁴Certification is the process by which a nongovernmental agency or association attests that an individual has met predetermined standards (e.g., passing a test or completion of a course of study) specified by the certifying body. It is meant to assure the public that a person has mastered a body of knowledge and acquired skills in a particular specialty.



Professional societies are the origin of many major laws that govern health professionals. For example, a professional society may determine that doctors should meet certain educational standards, nurses should work within a prescribed scope of practice, or physician assistants should answer certain questions on a licensure exam. Then, a state legislature may adopt a law, or a regulatory board may adopt a rule that further refines the professional society's recommendations or adopts them outright, giving them the force of law. While health professional licensure generally is considered a legal domain, most states' licensure requirements are based on and revised according to recommendations made by professional societies. Such was the case when the Michigan legislature (1) passed SB 139 (Public Act 151 of 1997) to allow optometrists to prescribe anti-glaucoma drugs and (2) included language in the Board of Nursing rules (September 1998) providing for the certification of advanced practice nurses (APNs are defined in detail later). In another example of this practice, the Michigan Board of Optometry required that licensure candidates pass the examination of the National Board of Examiners in Optometry as a criterion for licensure.

Frequently, professional societies make regulation recommendations that do not become law, but to which health professionals adhere nonetheless. For example, prior to the adoption of administrative rules creating certification requirements for Michigan's APNs, many nurses adhered to education, training, and other standards established by national professional societies (e.g., the National Association of Nurse Anesthetists), and many hospitals adopted bylaws or had formal policies requiring APNs to adhere to those established standards. Even hospitals without formal standards for APNs often preferred to hire those who met the requirements. In this way, many policies and procedures advocated by professional societies have become *de facto*, rather than *de jure*, policy.



DEFINING HEALTH PROFESSIONS

The legal regulation of Michigan health professionals primarily is based on their definition in the Michigan Public Health Code. The code defines the scope of practice and sometimes oversight of each profession, listing the tasks and responsibilities that each legally may assume. Unfortunately, the language used to define the various health professions is not uniform, making it difficult to compare one health profession to the next. The following definitions of health professionals—based on the language in the Public Health Code—were modified to improve clarity and facilitate comparison. (See Appendix One for the original health code definitions.)

Allopathic and Osteopathic Medicine and Surgery (Physicians)

The practice of allopathic medicine includes the diagnosis, treatment/cure, prevention, or relieving of a human disease, ailment, defect, complaint, or other physical or mental condition. Those practicing medicine, a profession which incorporates the entire spectrum of health care, may accomplish the above by attending and advising patients as well as employing medical devices, diagnostic tests, drugs or biologicals, surgical procedures, or other means. The practice of medicine entails offering or undertaking patient care as described above, as well as holding oneself out as able to do so. A physician is someone who is licensed under the state's Public Health Code to practice medicine, including surgery, regardless of whether the practitioner is a generalist or specialist.

The practice of osteopathic medicine and surgery is a separate kind of medicine and surgery. It also involves the diagnosis, treatment/cure, prevention, or relieving of a human disease, ailment, defect, complaint or other physical or mental condition. To care for patients, its practitioners also may attend and advise, as well as employ medical devices, diagnostic tests, drugs or biologicals, surgical procedures, and other means. The practice of osteopathic medicine and surgery differs from allopathic medicine in that it places special emphasis on the interrelationship of



the musculoskeletal system to other body systems. An osteopathic physician is someone who is licensed under the state's Public Health Code to practice osteopathic medicine and surgery, regardless of whether the practitioner is a generalist or specialist.

Medical specialties (e.g., psychiatry and ophthalmology) are not defined under the Public Health Code. For these definitions, it is necessary to turn to professional societies. Most medical specialties fall under the practice of allopathic medicine and osteopathic medicine and surgery, so for the most part, the same medical specialties exist for both MDs and DOs (see Appendix Two for a complete listing of the specialty boards governing these fields). The respective professional societies of allopathic medicine and osteopathic medicine and surgery, however, use separate (although similar) standards to approve their members' specialty certification programs. Nevertheless, all certified physician specialists have graduated from an accredited educational program, completed an approved residency training program, passed an examination, and met other requirements (e.g., continuing education) as required by their certifying professional society. For the purposes of this report, we have limited our discussion to the five medical specialties defined below.

- **Family practice** The medical specialty that renders care over a broad range of illnesses, having evolved from general practice medicine. Family practitioners provide continuing and comprehensive health care for the individual and family, integrating the biological, clinical, and behavioral sciences. The scope of family practice encompasses all ages, both sexes, each organ system, and every disease or injury.
- **Ophthalmology** The medical specialty concerned primarily with the comprehensive care of the eyes and vision. Ophthalmologists are the only practitioners medically trained to diagnose⁵ and treat all eye

⁵Through various means, virtually all health professionals in some way or another identify, determine, or ascertain the presence of certain patient afflictions. Only physicians, however, perform this task as it relates to medical diseases, conditions, or injuries. To highlight this distinction, this document uses the term diagnosis only when referring to judgements that licensed physicians and physician assistants (who have some medical training and who may work only under the supervision of a physician) make concerning the causes behind patients' health status and leading to the development and implementation of patient management plans.



and visual problems, including medical disorders of the eye. Those practicing this specialty employ vision services (glasses and contact lenses), medicine prescriptions, surgical procedures, and other methods for treatment (e.g., lasers).

- **Obstetrics and gynecology (OB-GYN)** Physicians in this specialty have completed additional specialty training that relates to the functions and diseases of female reproductive organs (gynecology) as well as labor and delivery (obstetrics).
- **Psychiatry** The study of medicine that takes into account (1) the effects of chemical balances and imbalances on the mind and behavior, (2) the functions of the brain, and (3) child and adult life experiences, among other factors. A psychiatrist is a physician who specializes in the diagnosis, treatment, and prevention of mental illnesses and substance-use disorders.
- **Anesthesiology** A medical specialty dedicated to the management of patients rendered unconscious or insensible to pain during surgical, obstetric, and certain other medical procedures. This involves patient evaluation and treatment during all stages of operation. Anesthesiologists focus on pain management, cardiopulmonary resuscitation, respiratory care problems, and the management of critically ill or injured patients in special care units.

(For more information on medical specialties, see the section titled “Education, Training, and Licensure.”)

Physician Assistance

Physician assistants (PAs) are health professionals who provide allopathic medicine or osteopathic medicine and surgery under the supervision of a licensed physician. According to the law, practice as a physician assistant is a subfield of the practices of allopathic medicine and osteopathic medicine and surgery; as such, in rendering health care, PAs may not delegate tasks to or supervise other licensed or nonlicensed health professionals.

Nursing

The practice of nursing includes the care/treatment and counsel/teaching of patients who (1) are experiencing changes in the normal health



processes or (2) require assistance in the maintenance of health and the prevention or management of illness, injury, or disability.

- A registered professional nurse (RN) is an individual (1) who is licensed to engage in the practice of nursing and (2) whose scope of practice includes the teaching, direction, and supervision of less-skilled people who perform nursing activities. An RN may perform under the supervision of a physician or dentist, and a physician may delegate in writing to an RN the ordering, receipt, and dispensing of medicines other than certain controlled substances.
- A licensed practical nurse (LPN) is a person who practices nursing but who has less comprehensive education and skills than an RN. An LPN may perform only under the supervision of an RN, physician, or dentist. The practice of a licensed practical nurse is a health professional subfield of the practice of nursing; as such, LPNs may not delegate tasks to or supervise other licensed or nonlicensed health professionals.

The Michigan Public Health Code allows the Michigan Board of Nursing to issue a specialty certification to RNs who have acquired advanced training beyond that required for initial licensure and demonstrated competency through examination or other evaluation processes (MCL 333.17210). These nurses are commonly referred to as advanced practice nurses (APNs), and they are prepared at the graduate level to work in one of the following three capacities:

- Nurse anesthetists, according to the American Association of Nurse Anesthetists, take care of patients' basic anesthesia needs before, during, and after surgery or the delivery of a baby.
- Nurse midwives, according to the American College of Nurse Midwives, manage women's health care, focusing on pregnancy, childbirth, the postpartum period, care of the newborn, and the family-planning and gynecological needs of women.
- Nurse practitioners, according to the American College of Nurse Practitioners, address most common and many chronic illnesses. A nurse practitioner focuses largely on health maintenance, disease prevention, counseling, and patient education in a variety of settings. With a strong emphasis on primary care, nurse practitioners are employed in several areas, including pediatrics, school health, family and adult health, women's health, mental health, home care, and geriatrics.



Some states also recognize a fourth specialty certification, known as the clinical nurse specialist. According to the Michigan Nurses Association, those involved in this specialty work more in the area of acute care (e.g., oncology and hematology) than primary care, which is the focus of most nurse practitioners. Under the State of Michigan Board of Nursing rules, clinical nurse specialists are considered and treated as nurse practitioners.

Psychology

The practice of psychology includes the rendering of services relating to understanding, predicting, and influencing the behavior of individuals, groups, organizations, or the public. The purpose is to identify, assess, treat, prevent, ameliorate, or relieve mental or emotional disorders, disabilities, or behavioral adjustment problems. The means for accomplishing these tasks include psychotherapy, counseling, behavior modification, hypnosis, biofeedback techniques, psychological tests, or other verbal or behavioral means. The practice of psychology does not include the practice of medicine, such as prescribing drugs, performing surgery, or administering electro-convulsive (or “shock”) therapy.

Chiropractic

The practice of chiropractic focuses on the relationship between the human body structure (primarily the spine) and function (as coordinated by the nervous system) and how that relationship affects the preservation and restoration of health. The practice includes determining the existence, treatment, prevention, and cure or relief of spinal subluxations (complex structural, functional, and/or pathological changes that compromise neural integrity and may influence organ system function and general health) or misalignments that produce nerve interference; this is done by using analytical instruments, nutritional advice, rehabilitative exercise, and adjustment apparatus. Chiropractors frequently adjust and manipulate articulations (the place where two or more bones are joined) of the human body, particularly the spine and its adjacent tissues. Chiropractic is a drug-free, nonsurgical science and, as such, does not employ either pharmaceuticals or surgery and other invasive procedures.



Optometry

The practice of optometry involves the following:

- Examination of the human eye (1) to ascertain the presence of defects and abnormal conditions (or the effects thereof) that may be corrected, remedied, or relieved by using lenses, prisms, or other mechanical devices and (2) for contact eye lenses (including fitting and insertion)
- Employment of physical means to determine (1) the presence of conditions that may affect how well the eye adjusts or refracts or (2) the range of vision or muscular balance of the human eye
- Adaptation or adjustment of lenses or prisms or the use or prescription of therapeutic pharmaceutical agents⁶ to correct, remedy, or relieve a defect or abnormal condition, or the effects thereof
- Upon certification by the Board of Optometry, employment of diagnostic pharmaceutical agents, or certain drugs used to determine the presence of a visual condition⁷ to (1) examine the human eye to ascertain a departure from the normal, measuring powers of vision and (2) adapt lenses to promote normal vision

These definitions of health professions apply to health professionals regardless of their practice setting or employment status. They reveal many similarities and differences among the described health professionals. For example, while anesthesiologists (physicians) and nurse anesthetists both may focus on ensuring that a patient is comfortable before, during, and after surgery, anesthesiologists do not require supervision, whereas a nurse anesthetist must be supervised by a physician. Furthermore, an anesthesiologist may render advanced care, such as that required for at-risk patients or in critical care situations, whereas a nurse may not. Also, ophthalmologists (physicians) and optometrists both focus on examining and treating patients' visual/eye

⁶MCL 333.17401d defines therapeutic pharmaceutical agent as (1) a topically administered drug used to correct, remedy, or relieve a defect or abnormal condition (or the effects thereof) of the human eye's anterior segment and (2) a topically administered anti-glaucoma drug. (The optometrist must co-manage glaucoma patients with an ophthalmologist.)

⁷The word "diagnostic" is in Michigan statute, but optometrists do not diagnose (see footnote 5).



conditions, but ophthalmologists may perform surgery and use a broader array of medications and techniques when caring for a patient. For example, an ophthalmologist may correct vision using laser surgery, but an optometrist may do so only with corrective lenses. The next two sections, “Scope of Practice and Limitations” and “Delegation and Supervision,” discuss the nuances of the above definitions in more detail by explaining the scope of practice and oversight rules for the different health professionals.





SCOPE OF PRACTICE AND LIMITATIONS

Scope of practice refers to (1) the extent to which providers may render health care services and the extent they may do so independently and (2) the type of diseases, ailments, and injuries a health care provider may address.

Although the law and rules play an important role in determining a health professional's scope of practice, other factors also determine whether an activity falls under that scope. One important determinant is a health profession's standard practices, or the assessments of the legal and physician community regarding who may perform a task and how it must be done. Another determinant is the health professional's training, skill, education, and experience, especially if s/he has a specialty certification. Finally, the precedent of law and the pattern of malpractice rulings play a role in defining the accepted scope of practice in an area. All of these things must be considered when defining a health professional's scope of practice, although the language of the law and rules must be the first consideration.

Physicians' scope of practice is the broadest of the health professionals, and physician assistants, advanced practice nurses, and experienced RNs have a broader scope of practice than less educated, trained, and experienced RNs and LPNs. This section examines the parameters of the different scopes of practice for these health professionals. (See Appendix Three-A for a side-by-side comparison of the scopes of practice of these health professionals and physicians.)

Physicians

Allopathic and osteopathic physicians, including those in the multiple specialties (family practitioners, ophthalmologists, OB-GYNs, psychiatrists, and anesthesiologists), have the broadest scope of practice of the health professions, due to their medical school and postgraduate training. According to (1) the legal definitions of the practice of medicine and osteopathic medicine and surgery, (2) general standards of practices, and (3) their education and training, their scope of practice allows them to do the following:



Evaluation

- Screen and assess patients
- Take medical histories
- Prepare patient summaries
- Perform both noninvasive and invasive (e.g. endoscopy) physical exams
- Collect specimens through both invasive (e.g., tumor biopsy) and noninvasive (e.g., throat culture) means
- Order laboratory studies
- Diagnose disease, injuries, or other ailments

Monitoring

- Advise, counsel, and instruct patients on health care treatment and prevention
- Review and record information in patient records
- Devise and implement patient-management plans
- Monitor and determine the effectiveness of chosen health care interventions
- Admit patients into or release them from hospitals

Therapy

- Develop and initiate medical treatment regimens or protocol
- Initiate or change orders on patients' charts in hospitals, clinics, nursing homes, or other places
- Initiate and administer or order the administration of other patient therapies (e.g., physical therapy or visits with a nutritionist)
- Prescribe and administer or order the administration of patient medications (includes controlled and noncontrolled substances)
- Perform surgical and other invasive procedures (e.g., spinal punctures, laser procedures, and bone marrow aspirations) as well as noninvasive procedures

Other

- Refer patients to other health care providers and agencies as appropriate
- Use or order the use of medical devices and equipment for the purpose of patient diagnosis, care, or monitoring



- Delegate specific tasks or duties to health professional and other employees
- Supervise health professional and other employees
- Train and educate other health professionals
- Perform routine health care and office studies
- Manage a professional medical practice

Practice Limitations

Physicians are the only health professionals who are allowed to perform all of the above tasks, but, as later discussion will detail, many health professionals may perform many of the tasks, often as long as certain conditions are met. In addition to the law and administrative rules, practice limitations are determined by hospital regulations, professional societies, and medical malpractice suits and settlements (i.e., case law).

The law ensures that because physicians' health care education and training exceeds that of other health professionals,⁸ their scope of practice requires them to address the most severe and complex injuries and illnesses; they may directly address or delegate less severe and complex cases, or refer them to other physicians, as they deem appropriate.

In many respects, a physician's scope of practice broadens along with his/her skill and knowledge base, though this depends on years of practice, formal training, and specialization. A physician practicing in a certain specialty will have a broader scope of practice within that specialty area than a physician in another specialty. For example, an OB-GYN will have a broader scope of practice concerning women's reproductive health issues than a psychiatrist, ophthalmologist, anesthesiologist, or family physician, even though each has received medical school and internship training in the subject matter.

Once physicians are sufficiently trained or have met the criteria that authorizes them to work independently, it is their responsibility to know

⁸There may be exceptions to this statement. For example, while a physician may know more about addressing patients' illnesses and injuries, nurses may have more training and education when it comes to addressing patients' emotional needs.



when their own scope of practice ends and when another begins. For example, an ophthalmologist examining a droopy eyelid must be able to discern when the necessary care exceeds his/her own treatment capability and when to consult or refer the case to a neurologist or other appropriate specialist. Also, a family practitioner must know the extent to which s/he can address a woman's reproductive health and when s/he should consult or refer to an OB-GYN. This process is not limited only to physicians; other health professionals also face similar decisions.

Broad prescriptive and surgical authority is one of the key responsibilities that makes the medical scope the most far reaching of the health professions. For example, physicians may prescribe controlled substances, but other health professionals who also have limited prescriptive authority (e.g., optometrists) may not. Also, the medical scope of practice encompasses a much broader range of diseases and injuries than other health professional scopes of practice. For example, both optometrists and ophthalmologists (physicians) are trained in their specialty area—vision care; but ophthalmologists also must obtain extensive education and training in each of the remaining medical “core competency” subjects, including internal medicine, pediatrics, family practice, obstetrics and gynecology, psychiatry, and surgery. While an ophthalmologist may not have studied psychiatry in the same detail that a psychiatrist has, s/he still must learn the basics. Presumably, as a result of attending medical school, all physicians are trained to provide at least basic care in each of these specialty areas.

Physician Assistants

As defined, *physician assistants* (PAs) are health professionals who provide medical or osteopathic medical and surgical services under the supervision of a licensed physician (MCL 333.17001 and 333.17501). This means that PAs can perform many of the same tasks and assume many of the same responsibilities that MDs and DOs do, depending on their knowledge, skill, and experience. In many cases, PAs may not perform tasks unless they have been delegated by a physician, and those tasks they do assume generally fall within the scope of practice of their supervising physician.



The law stipulates that PAs may practice supervised medicine only in a medical care setting where the supervising physician regularly sees patients. Thus PAs may go on rounds or make calls at other locations (e.g., hospitals or clinics) only under physician supervision. They may not delegate to or supervise others. According to the law and general standards of practice, physician assistants may do the following:

Evaluation

- Screen and assess patients
- Take medical histories
- Prepare patient summaries (which in turn must be countersigned by the supervising physician)
- Perform noninvasive physical exams and assist physicians in the more invasive exams (e.g., endoscopy)
- Collect specimens for testing, but generally through noninvasive means only (e.g., throat culture); again, PAs can assist in the more invasive procedures (e.g., tumor biopsy), including surgery
- Order laboratory studies
- Under supervision, assess disease, injuries, or other ailments

Monitoring

- Advise, counsel, and instruct patients on health care treatment and prevention
- Review and record information in patient records
- Help devise and implement patient management plans
- Monitor and determine the effectiveness of chosen health care interventions
- Assist physicians in admitting patients into or releasing them from hospitals (PAs may not perform this task themselves)

Therapy

- Help develop and initiate medical treatment regimens—always under a physician’s direct or indirect supervision
- Citing the supervising physician’s name along with his/her own (per MCL 333.17048), prescribe and administer patient medications. (Some of these prescriptions, depending on their classification, must



- be signed by a supervising physician.)⁹
- Perform noninvasive procedures and assist physicians in performing surgical and other invasive procedures
 - As directed by a supervising physician and with a physician's signed approval, initiate and administer certain patient therapies
 - Initiate or change orders on patients' charts in hospitals, clinics, nursing homes, or other places, as long as physician-approved protocols are in place

Other

- Facilitate referring patients to other health care providers and agencies (the physician makes the official referral)
- Use medical devices and equipment for the purpose of patient diagnosis, care, or monitoring—depending on their skill, knowledge, and experience
- Supervise health professional and other employees as determined appropriate by a supervising physician
- Train and educate other health professionals as determined appropriate by a supervising physician
- Perform routine health care and office studies, under the supervision of a physician

Practice Limitations

As described, physician assistants' scope of practice closely resembles that of physicians, but with important limitations. Physician assistants may not

- perform surgical or invasive procedures (PAs may assist in these);
- delegate tasks or duties to health professional and other employees (this is prohibited by Michigan law [MCL 333.16215] because physician assistance is a medical subfield);
- order other health professionals to administer patient medications or therapies;

⁹State of Michigan Law (MCL 333.17076[3]) states, "A physician's assistant may prescribe drugs as a delegated act of a supervising physician, but shall do so only in accordance with procedures and protocol for the prescription established by rule of the appropriate board."



- order other health professionals to use medical devices and equipment for the purpose of patient diagnosis, care, or monitoring, or for any other purposes;
- manage a professional medical practice independent of a physician.¹⁰

Concerning vision care, common practice dictates that PAs may perform routine visual screening or testing, postoperative care, or assistance in the care of medical diseases of the eye under the supervision of a physician. However, State of Michigan law (MCL 333.17074) states specifically that they may not do the following:

- Perform acts, tasks, or functions to determine the refractive state of a human eye or to treat refractive anomalies of the human eye, or both
- Determine the eye glasses or contact lens prescription specifications required to treat refractive anomalies of the human eye, or determine modification of spectacle or contact lens prescription specifications, or both

Even though PAs also are taught and trained to deal with many different diseases and injuries that fall within many different medical specialties, their scope of practice, as it relates to the types of medical cases they address, directly corresponds to their supervising physician's practice. This means, for example, that if an anesthesiologist supervises a physician assistant, that PA will work solely in the area of anesthesiology, even if s/he also has substantial training in family practice or psychology.

Like physicians, PAs' scope of practice broadens along with their skill and knowledge base, which depends on years of practice, formal training, and specialization. The American Academy of Physician Assistants (AAPA) notes, however, that the cases handled by PAs generally are less complicated than those handled directly by physicians, whose training and education requirements are the most demanding of the health professionals.

¹⁰State of Michigan law (MCL 333.17076) notes, "A physician assistant shall provide medical care services only in a medical care setting where the supervising physician regularly sees patients." However, a physician assistant may make calls or go on rounds under the supervision of a physician "at various locations outside the location where the physician usually sees patients."



Nurses

The practice of nursing differs from the practice of medicine in many ways. Nurses focus on prevention, health promotion, patient education, and patient assistance. Their duties involve rendering nonmedical care to relieve the symptoms of patients' injuries, diseases, and conditions, and identifying ancillary health care needs. While nurses may perform certain duties that fall under the purview of medicine (e.g., prescribing certain medications), they may do so only at the delegation and under the supervision of a physician. When they perform the aforementioned nursing activities, however, they may do so on their own or as directed and supervised by other nurses, depending on the task and their license and/or specialty certification. According to the law and general standards of practice, nurses can expect to do the following:

Evaluation

- Screen and assess patients
- Prepare patient summaries (which in turn must be countersigned by the supervising physician)
- Take medical histories
- Collect specimens through noninvasive (e.g., throat culture or urine sample) but not invasive (e.g., tumor biopsy) means
- Ascertain the presence of certain injuries, conditions, or ailments (excluding disease), pursuant to physician direction and supervision

Monitoring

- Advise, counsel, and instruct patients on health care treatment and prevention (e.g., providing teaching and emotional and physical support in preparation for therapeutic procedures; providing pre-operative and post-operative teaching, such as the use and care of tubes and drains, etc.)
- Review and record information in patient records
- Help monitor and determine the effectiveness of chosen health care by monitoring and assessing vital signs, wounds, etc., and sharing observations with physicians and PAs, who ultimately determine the effectiveness of care



- Assist physicians in admitting patients into or releasing them from health facilities (nurses may not perform this task themselves)

Therapy

- Develop and initiate nursing regimens, for example, applying infection control measures; assessing and managing wounds; applying heating and cooling devices; applying and teaching proper positioning and mobility techniques, including range of mobility exercises and use of assistive devices; providing comfort and pain reduction measures, including positioning and therapeutic touch; providing care of the respiratory system, including chest physiotherapy; performing accurate intake and output measures; and providing individual hygiene maintenance
- Implement patient management plans as devised and directed by a physician
- Administer therapies as directed by a supervising health professional
- Administer medications as directed by a supervising health professional

Other

- Train and educate other nurses or health professionals, as long as the activity is within the training nurse's scope of practice
- Refer patients to other health care providers, especially physicians who handle more complex cases
- Advanced practice nurses (APNs) and registered nurses (RNs) (but not LPNs) may delegate specific tasks or duties to other nurses or health professionals, as long as the activity is within the delegating nurse's scope of practice and the person to perform the task is properly trained, educated, and skilled
- APNs and RNs (but not LPNs) may supervise other nurses or health professionals, as long as the activity is within the supervising nurse's scope of practice

In addition to the above, APNs and some RNs generally may do the following within their scope of practice:

- Order laboratory studies
- Initiate or change orders on patients' charts in hospitals, clinics,



nursing homes, or other places, as long as physician approved protocols are in place

- Perform noninvasive physical exams (e.g., a nurse midwife may examine a pregnant woman and her fetus, and a nurse anesthetist may check the strength of patient's heart before surgery), but not invasive or complex physical exams (e.g., endoscopy)
- Use and order use of medical devices and equipment for the purpose of identifying patient conditions, injuries, or diseases; rendering care; or monitoring patients (this depends on the complex workings and invasiveness involved in using the device)
- Prescribe noncontrolled medications following protocols established by the supervising physician (this task must be delegated in writing)
- Manage a professional nursing practice (e.g., a nursing home or birthing center), if a relationship with a physician is established to provide approval and oversight of certain practices and handle the referrals of emergency or nonroutine situations
- Perform routine health care and office studies

Practice Limitations

No matter a nurse's level of education, training, or experience, there are certain health care-related activities that fall only within the medical scope of practice and therefore are limited only to physicians and in some cases PAs. This means that nurses may not do the following:

- Diagnose and treat medical conditions; however, nurses may identify disease, injuries, or other ailments or conditions for the purpose of providing routine nursing care for stable patients (for example, a nurse midwife may determine that a woman is pregnant and offer pregnancy counseling and follow-up care; a nursing home RN may determine that a patient is developing bedsores or experiencing muscle atrophy and devise a mobility routine for the patient; or a nurse practitioner may determine that a patient has the flu and recommend bed rest and fluids, or that a diabetic has high blood sugar and should take an insulin injection)
- Perform surgical or invasive procedures of any kind

As the above indicates, some nurses' scope of practice is broader than others, depending on the nurse's presumed capabilities. The scope of



practice for many nurses also depends on their supervising physician's scope of practice. For example, an RN or LPN who works for a family doctor likely will deal with a range of diseases and injuries and will care for people of all ages, including grandparents, parents, and children. An RN or LPN who works for an ophthalmologist, alternatively, often will deal with diseases and conditions of the eye.

These arrangements often are made with a practical purpose in mind; often a nurse has trained for or obtained a specialized education or interest in certain areas and subsequently has chosen—or was chosen—to work with an appropriate physician as a result. This usually is the case for APNs, including nurse midwives, nurse anesthetists, and nurse practitioners, who have obtained a master's degree in nursing and undergone special training, testing, and certification to work in their chosen field of practice.

Despite the previous analysis of the scopes of practice of physician assistants and advanced practice nurses, it may be somewhat difficult to keep the similarities and differences between them straight. In terms of what PAs and APNs are prohibited from doing, there are many similarities. First, both must work under the direct or indirect supervision of a physician, or in conjunction with a physician, although PAs legally must do so at all times, and APNs must do so only when care extends outside the nursing scope of practice. Second, individuals in neither health profession typically are allowed to admit patients or release them from health facilities, although both may assist in the process. Third, most health facilities specify that neither an APN nor a PA can initiate or change orders on a patient's health facility charts without physician-approved protocols in place.

At the same time, both PAs and APNs/RNs legally may prescribe drugs, as long as the prescription is made in a supervising physician's name and certain protocols established by a supervising physician are followed. The task of prescribing drugs must be delegated to nurses in writing, however, while the task may be delegated to PAs either orally or in writing. Physicians may delegate prescription of schedule three and five controlled substances to a PA, nurse midwife, or nurse practitioner, if the physician prepares a written authorization that follows certain protocols. In addition, physicians may delegate prescription of schedule two controlled



substances to a PA, nurse midwife, or nurse practitioner if the physician prepares a written authorization that follows certain protocols that are more restrictive than those for schedule three and five controlled substances. (For example, a physician may not delegate the prescription of more than a seven-day quantity of schedule two drugs to a patient about to be discharged from a hospital, hospice, or freestanding outpatient surgical facility.)

There also are many differences between the professions. In general, PAs typically assist in the development and implementation of patient management plans for medical care, which involves the full spectrum of services, while nurses generally do so only for nursing care, which focuses on disease prevention, health promotion, and patient assistance and comfort. While PAs have a wider spectrum of focus, APNs and other nurses have certain duties that PAs do not. For example, PAs may not delegate tasks to other health professionals, nor may they manage a private practice, while APNs may do both of these things.

Psychologists, Chiropractors, and Optometrists

Psychologists, optometrists, and chiropractors also play a role in the health of Michigan residents. Like physician assistants and nurses, these health professionals have a narrower scope of practice than physicians do. First, the diseases and illnesses they treat are limited to certain body systems: Psychologists deal with human behavior, chiropractors focus on the spine and related structures, and optometrists address the eyes. MDs and DOs, on the other hand—even those with a particular specialty—can address the full range of human body systems and the diseases and injuries that affect them. In addition, the law places limits on the services psychologists, optometrists, and chiropractors provide, particularly when it comes to surgery and prescribing drugs. (See Appendix Three-A for a side-by-side comparison of the scopes of practice of these health professionals and physicians in the corresponding specialties.)

Psychologists

Psychologists' practice involves helping patients work through, discuss, and otherwise address emotional, behavioral, and psychological health



issues affecting patients' lives (e.g., addressing the emotional affects of abuse through therapy or trying to overcome a fear of heights). It also can involve performing studies and conducting psychological research (e.g., rapid-eye-movement studies to determine dream patterns or determining the effects of prison overcrowding) and other practices (e.g., hypnosis).

Psychology does not involve treatment or care for medical conditions that may result in modified behavior, nor does it involve surgery or administration of electro-convulsive (i.e., "shock") therapy, which fall within the psychiatric—or medical—scope of practice. Furthermore, unlike psychiatrists (physicians), psychologists may not admit or release patients from hospital psychiatric wards or other institutions.

State of Michigan law and standard practices allow psychologists to do the following:

Evaluation

- Screen and assess patients for mental or emotional disorders, disabilities, or behavioral adjustment problems
- Take psychological health histories
- Perform psychological exams

Monitoring

- Advise, counsel, and instruct patients on mental and behavioral health
- Review and record information in patients' psychological records
- Devise and implement patients' psychological health-management plans
- Monitor and determine effectiveness of chosen psychology interventions

Therapy

- Develop and initiate psychological treatment regimens or protocols
- Initiate and administer or order the administration of other specialized psychological therapies (e.g., psychotherapy, counseling, behavior modification, hypnosis, or biofeedback techniques)



Other

- Refer patients to other health care providers and agencies as appropriate (e.g., psychiatrists or substance-abuse intervention programs)
- Use or order the use of devices and equipment for the purpose of identifying psychological conditions, rendering care, or monitoring patients (e.g., pulse and brain wave monitors)
- Delegate specific tasks or duties to health professional and other employees
- Supervise health professional and other employees
- Train health professional and other employees
- Perform psychology studies
- Manage a professional practice

Practice Limitations

Psychologists cannot

- perform noninvasive or invasive physical exams;
- collect fluid or tissue specimens through either invasive or noninvasive means;
- order laboratory studies of collected specimens;
- diagnose disease that may stem from a medical condition, such as a thyroid disorder;
- admit patients into or release them from health care facilities or units;
- develop and initiate medical treatment regimens or protocols;
- prescribe and administer or order the administration of patient medications;
- perform noninvasive (e.g., electro-convulsive or “shock” therapy) or invasive (surgical or other) procedures;
- initiate and administer or order the administration of patient therapies that fall outside the psychological scope of practice; or
- initiate or change orders on patients’ charts in hospitals, clinics, nursing homes, or other places.

Psychiatrists (physicians) may assume all the tasks both included and excluded from psychologists’ scope of practice. Their emphasis, however, is more on the medical aspects of behavioral health, although they also will take into account various other factors. Psychiatrists’ work revolves



around both kinds of cases—those requiring medical care and those requiring psychological care.

Chiropractors

While the practice of chiropractic is limited mainly to the spinal column and related bones and tissues, some health professionals in this field apply it to treating a diverse array of disorders, such as hypertension and asthma. Many believe that applying the practice of chiropractic to address health problems not directly related to the spine constitutes a breach of the chiropractic scope of practice.

Proponents of the more extensive scope of treatment, however, argue that chiropractors legally may address such problems because Michigan law states that the chiropractic practice may involve “the establishment of neural integrity utilizing the recuperative powers of the body for restoration and maintenance of health” (MCL 333.16401). Those seeking to expand the number of injuries and ailments chiropractors may address contend that this language allows them to explore not just the spine, but its related tissues and their connection to human health in general, not just musculoskeletal health.

According to the State of Michigan law and standard practices, chiropractors may do the following:

Evaluation

- Take chiropractic histories (accounts of a patients’ spinal health, past chiropractic care, etc.), including histories of spinal pain and discomfort and previous treatments sought and obtained
- Screen and assess patients by analyzing the spine and related bones and tissues

Monitoring

- Advise, counsel, and instruct patients on chiropractic care
- Offer chiropractic treatment and preventative care, including adjustment of spinal subluxations or misalignments that produce nerve interference



- Review and record information in chiropractic patient records
- Devise and implement chiropractic management plans
- Monitor and determine the effectiveness of chosen chiropractic interventions

Therapy

- Develop and initiate chiropractic regimens or protocols
- Adjust spinal subluxations or misalignments and related bones and tissues for establishment of neural integrity to permit the inherent recuperative powers of the body to restore and maintain health
- Offer and administer or order administration of nutritional advice and rehabilitative exercise, the latter of which involves coordination of an exercise program, performance of tests and measures, exercise instruction and consultation, supervision of exercise personnel, and use of exercise and rehabilitative procedures, with or without assistive devices
- Use analytical instruments that monitor the body's physiology, including x-ray machines, for the purpose of determining subluxated or misaligned vertebrae or related bones and tissues
- Use adjustment apparatus, or tools or devices that apply a mechanical force to correct a subluxation or misalignment of the vertebral column or related bones and tissues

Other

- Refer patients to other health care providers and agencies (e.g., physicians and hospitals) as appropriate
- Delegate specific tasks or duties to health professional and other employees (e.g., to physical therapists or chiropractors-in-training)
- Supervise health professional and other employees
- Perform routine chiropractic and office studies
- Manage a professional practice
- Train other health professionals, including chiropractors and chiropractic assistants

Practice Limitations

As stated earlier, chiropractors may not practice medicine, only chiropractic. This means chiropractors may not



- diagnose medical conditions (however, chiropractors may identify and determine the existence of spinal subluxations or misalignments that produce nerve interference);
- take medical (versus chiropractic) histories;
- perform invasive (e.g. endoscopy) physical exams or noninvasive physical exams that do not relate to the spine and its related bones and tissues;
- collect specimens through either invasive (e.g., tumor biopsy) or noninvasive (e.g., throat culture) means;
- order laboratory studies;
- admit patients into or release them from hospitals;
- develop and initiate medical treatment regimens or protocols (though they may develop and initiate chiropractic treatment regimens or protocols);
- prescribe and administer or order the administration of patient medications;
- perform surgical or other procedures that are invasive (e.g., spinal punctures and bone marrow aspirations) or incisive (involving cutting, such as the removal of a suspicious mole);
- initiate or change orders on patients' charts in hospitals, clinics, nursing homes, or other places; or
- use or order the use of medical devices and equipment for the purpose of patient diagnosis, care, or monitoring. (Chiropractors may use only those instruments, including x-rays, that monitor the body's physiology as it relates to spinal subluxations and misalignments).

The chiropractic scope of practice does not involve the prescription of medications for any purpose, nor may these health professionals perform surgical or other invasive procedures of any sort. In this respect, chiropractors stand apart from physicians, who not only treat the entire human body, but also regularly perform the previously described tasks, which are off limits to chiropractors.

Optometrists

The practice of optometry distinguishes itself from chiropractic and psychology in that certain of its practitioners may prescribe, use, and order the use of certain pharmaceutical agents to detect and treat certain



visual conditions. Specifically, the law states that pharmacy-certified optometrists may use topically administered drugs on the surface of the eye or surrounding areas. This means that although an optometrist may administer topical anesthetics, anti-glaucoma drugs, or other therapeutic agents, s/he may not use any medical injections. Optometrists also are prohibited from performing any surgical or other invasive procedures, including laser surgery (though they may use lasers for observation), ionizing radiation, therapeutic ultrasound, or incisions.

State of Michigan law allows pharmacy-certified optometrists to administer the described pharmaceuticals, but only if the optometrist has established an emergency plan to refer patients who experience adverse drug reactions to a physician. This plan must include the names of at least three physicians, physician clinics, or hospitals (at least one of which is skilled or specializes in the diagnosis and treatment of the eye) to which the optometrist can refer such patients. The law also stipulates that if an optometrist encounters any patient signs or symptoms that may be evidence of disease that the optometrist is not authorized to treat, s/he must refer the case to a physician, usually an ophthalmologist (physician). Furthermore, the law states that prescribing optometrists must successfully complete 60 classroom hours of study in general and clinical pharmacology as it relates to the practice of optometry, with particular emphasis on the use of diagnostic pharmaceutical agents for examination purposes. Not less than 30 of the 60 classroom hours must be in ocular pharmacology and emphasize the systemic effects of and reactions to diagnostic pharmaceutical agents, including the emergency management and referral of any adverse reactions that may occur.

Both ophthalmologists (physicians) and optometrists detect, treat, and manage diseases and disorders of the eyes; however, the nature of their roles in providing eye care differs substantially. For example, while an optometrist may observe the presence of more complex diseases like glaucoma, cataracts, and retinal disorders, and systemic problems like hypertension and diabetes, generally, only ophthalmologists—medically trained physician specialists who deliver total eye care—provide the medical diagnosis and treatment for them. An optometrist may ascertain the presence of such conditions as nearsightedness, farsightedness, or



astigmatism. Then, the optometrist may render appropriate treatment (e.g., prescribing eyeglasses and contact lenses, low vision aids, and, as discussed above, topical medications for the eye). If an optometrist treats a disease or condition s/he is authorized to treat, but notes that the treatment is not yielding acceptable results, the optometrist must consult a physician.

According to law and standard practices, optometrists may do the following:

Evaluation

- Screen and assess patients to ascertain the presence of defects or abnormal visual conditions, that may be—or the effects of which may be—corrected, remedied, or relieved using lenses, prisms, or other mechanical devices
- Take optometric histories
- Perform only noninvasive (not invasive) physical exams of the eyes to determine the accommodative or refractive conditions or their range of powers of vision or muscular equilibrium

Monitoring

- Advise, counsel, and instruct patients on visual health
- Review and record information in patients' optometry records
- Devise and implement patient management plans relating to the practice of optometry
- Monitor and determine effectiveness of chosen optometric interventions

Therapy

- Develop and initiate optometric treatment regimens or protocols, which may involve the adaptation or adjustment of the lenses or prisms or the use of therapeutic pharmaceutical agents to correct, remedy, or relieve a defect or abnormal condition of the human eye
- Prescribe and administer or order the administration of topical diagnostic and therapeutic pharmaceuticals
- Initiate and administer or order the administration of other patient therapies (e.g., eye exercises)



Other

- Refer patients to other health care providers (e.g., physicians) and agencies (e.g., hospitals) as appropriate
- Use or order use of optometric devices and equipment for the purpose of patient care or monitoring
- Delegate specific tasks or duties to health professional and other employees
- Supervise health professional and other employees
- Train health professional and other employees
- Perform routine optometric care and office studies
- Manage a professional practice

Practice Limitations

In contrast to ophthalmologists and other physicians, optometrists may not

- diagnose medical conditions affecting the visual system (however, optometrists may ascertain the presence of conditions and abnormalities that fall within the practice of optometry);
- perform invasive physical exams;
- collect specimens through either invasive and noninvasive means;
- order laboratory studies;
- admit patients into or release them from hospitals;
- develop and initiate medical (versus optometric) treatment regimens or protocols;
- prescribe and administer or order the administration of nontopical patient medications;
- perform surgical or invasive (e.g., cataract or laser surgery) procedures; or
- initiate or change orders on patients' charts in hospitals, clinics, nursing homes, or other places.

Ophthalmologists (physicians) perform those tasks that are included in the optometric scope of practice as well as those excluded from it. In addition, they may perform all tasks as they pertain to medicine, as well as optometry. Ophthalmologists diagnose and render care for vision defects, both simple and complex, as well as diseases of the eye.



DELEGATION AND SUPERVISION

The Michigan Public Health Code is instrumental in regulating health professional delegation and supervision. It goes so far as to define the terms, specifying that delegation is authorization granted by a licensed health professional to another licensed or unlicensed person to perform selected acts, tasks, or functions that (1) fall under the scope of practice of the delegator and (2) are not within the scope of practice of the person to whom the assignment is delegated. Under the definition, the performance of an act, task, or function without authorization from a delegator constitutes the illegal practice of a licensed health profession (MCL 333.16104).

The law defines supervision as the overseeing of or participation in the work of another person by a licensed health professional. A licensed health professional who is supervising other people must ensure that s/he

- communicates continuously, directly, and personally (by radio, telephone, or other communication) with those being supervised;
- is available on a regularly scheduled basis to (1) review the practice of those being supervised, (2) review records, and (3) further educate those being supervised in the performance of their tasks; and
- provides predetermined procedures and drug protocols (MCL 333.16109).

The Public Health Code also is very specific about who may delegate to whom and who may supervise whom (MCL 333.16215[1]). First, it states that those who practice a health professional subfield (e.g., physician assistants and licensed practical nurses) may not delegate at all. Certain other licensed health professionals may delegate to licensed or nonlicensed people who are qualified, based on their education, training, or experience, to perform selected acts, tasks or functions. This requires a health professional who wants to delegate a task to consider such things as the following:



- The formal academic education of the person to whom an assignment may be given
- Whether the person has undergone training, including continuing education, sufficient to qualify him/her for the task
- Whether the person was tested following an education or training program, and the results of those tests
- The person's strengths and weaknesses based on the extent of his/her experience, and whether that experience is consistent with the person's training
- The potential for harm to the patient and predictability (or lack thereof) of the outcome of the task to be performed

Second, the law stipulates that a licensed health professional may not delegate an act, task, or function that falls outside his/her own scope of practice.

Third, the law specifies that a licensed health professional may not delegate acts, tasks, or assignments that exceed the judgement and other capabilities of another health professional to whom s/he otherwise would delegate. While some people may be trained or educated to perform certain tasks, acceptable and prevailing standards of care prevail when measuring the appropriateness of delegation. This means, for example, that even though an RN could learn to perform brain surgery, a surgeon may not delegate this task because acceptable standards of care dictate that an RN has not been appropriately trained or educated to perform such a task.

Fourth, the law allows a health professional to delegate specific activities, but not a broad component of his/her scope of practice. For example, an RN may not delegate the task of patient education to non-RNs; rather, the delegated task may be providing the patient specific information to a particular patient about his/her disease or injury. Also, a physician may not delegate to an RN the tasks of diagnosing a complex disease or condition, but the physician may ask the RN to take the patient's blood pressure or pulse to help in the diagnosis.

Finally, although the law does not state so specifically, general standards of practice dictate that if a health professional does delegate, s/he must



supervise the person to whom the assignment is given. If a task is delegated, the person delegating must supervise or provide for supervision by a person sufficiently qualified to do so. A clear chain of command or line of authority must exist.

Given this background, it is possible to explore certain conclusions about the delegation and supervision relationships among the various health professionals discussed throughout this document.

Physicians

Because they generally have the highest levels of formal education and training and broadest scope of practice, allopathic and osteopathic physicians, including those in the entire range of specialties (e.g., family practitioners, ophthalmologists, OB-GYNs, psychiatrists, and anesthesiologists), possess the most far-reaching authority to supervise and delegate of all the health professions. It is physicians' responsibility, under the Public Health Code, to supervise—either directly (in person) or indirectly (through another designated physician or through phone or other communication)—all people to whom they delegate tasks.

Physician assistants and nurses are the health professionals with whom physicians most closely work and whom they most frequently supervise. Although nurses and PAs provide many similar health care services (see the section titled “Scope of Practice” for more discussion), the way that each profession is supervised is different.

State of Michigan law stipulates that except in an emergency situation, a physician assistant may not provide medical care services unless s/he is under the supervision of a physician or properly designated alternative physician (MCL 333.17074).¹¹ The law adds that physician assistants

¹¹MCL 333.17048 prohibits physicians who (1) are sole practitioners or (2) practice in a group of physicians and treat patients on an outpatient basis from supervising more than four physician assistants. If a physician supervises a PA at more than one practice site, the physician may supervise only two PAs by a method other than the physician's actual physical presence (e.g., through phone communication or another designated supervising physician). Conversely, a physician who is employed by, under contract to, or has privileges at a health facility or agency or state correctional facility may supervise more than four PAs at that location.



are the “agent” of the supervising physician (MCL 333.17078). No such statutory language pertains to nurses, whether they are APNs, RNs, or LPNs. Regarding them, the law states simply that health professionals with higher levels of education, training, or experience (e.g., physicians) may delegate to and supervise those with less (e.g., nurses and others), and that the selected task must fall under the supervisor’s scope of practice. Nurses and others take this to mean that a physician may supervise a nurse who performs a delegated task that falls within the scope of medicine, but only an APN or RN may supervise the performance of a task that falls under the scope of nursing.

Nurse education programs generally are set within schools of nursing, wherein the teachers are primarily nurses. Although physician assistants and nurses both are regulated under the Public Health Code, PAs are regulated in the section titled “Medicine,” which also governs physicians, and nurses are governed under a separate section titled “Nursing.” Also, rules governing PAs are drafted by the Board of Medicine and Board of Osteopathic Medicine and Surgery, which also draft rules governing physicians, while rules governing nurses are drafted by the Board of Nursing, which drafts rules for nurses only.

Regardless of how PAs and nurses view their roles relative to physicians, and regardless of whether a physician “supervises and delegates” or “seeks collaboration” concerning the completion of certain medical tasks, the end result of the relationship is the same: Together they seek to provide for patients’ health care needs. When it comes to rendering that care, however, doctors are held ultimately responsible.

State of Michigan law holds physicians liable if the health professionals to whom they assign tasks cause patient harm in the course of completing the tasks. For example, if a physician delegates a medical task to an RN, and the RN harms the patient in the course of performing the task, the physician can be held liable, along with the RN.¹² The rationale for this practice is that patient harm generally can be avoided when physicians

¹²Supervising health professionals and health facilities cannot assume or exempt other health professionals from their liability, but they can share in it.



sufficiently meet their supervision and delegation obligations.¹³

Given their legal and professional responsibility, physicians and other health professionals must ensure that they (or another qualified person) are available at all times—physically, via telephone, or other means—when those whom they supervise are rendering care. The level of supervision depends, however, on the skill, knowledge, and expertise of those being supervised and the complexity and nature of the work those people are assuming. As a rule of thumb, a physician’s direct supervision or immediate presence is required during critical points in care that may exceed the supervised person’s level of expertise, knowledge, or scope of practice.

For example, a physician must be available to answer questions or extend help to a physician assistant who is diagnosing and rendering care to a patient exhibiting symptoms of heartburn, but the physician does not necessarily have to be in the room observing and/or directing the physician assistant’s every action. Supervision in this case likely would include review of the physician assistant’s work, including records/charts, prescriptions, notes, etc., and signing off on the work. Conversely, if simple heartburn actually turned out to be a heart attack or other severe problem, the physician likely either would observe personally and/or direct the physician assistant or assume the patient’s case him/herself.

The same likely would be the case if a nurse midwife were delivering an infant at a hospital. If the birth were normal, an OB-GYN generally would review and approve the APN’s work, but if the delivering woman exhibited signs of hemorrhage or any other harmful condition, the OB-GYN would be called in to supervise directly or handle the situation.¹⁴ In the above examples, whether the physician would direct or assume the patient’s care would depend on the physician assistant’s or nurse midwife’s education,

¹³Under Michigan law, health facilities and others that employ health professionals who have caused a patient harm also can be held liable, because they are considered facilitators of care.

¹⁴Even if the nurse midwife delivered the baby at a private clinic or practice, or if perhaps a certified nurse practitioner had practiced independent from a physician, standard practices dictate that an informal supervisory relationship with a physician exist, mainly for consultation or referral in case of an emergency. Usually such a relationship also entails the doctor reviewing and signing off on certain activities.



training, and experience. In the above examples and in certain other circumstances (e.g., the writing of prescriptions), a physician develops written, predetermined procedures or protocols that specify, among other things, when his/her presence is required and when it is not.

Even though the law requires physician supervision of health professionals with less education, skill, or experience, it does not dictate necessarily that physicians supervise health professionals with specialties that correspond to their own. It does say that a physician may delegate only those tasks that fall under his/her scope of practice. For example, if a nurse anesthetist renders anesthesia during surgery, standard practices dictate that a qualified physician—not necessarily an anesthesiologist—be available. In this case, a surgeon whose patients frequently undergo anesthesia likely could supervise the nurse anesthetist adequately, but a family practitioner with little of such experience likely could not.

Physician oversight is not limited to people practicing other health professions; it also encompasses physician supervision of and delegation to other physicians, typically students, interns, or residents. Again, as specified in law, who oversees whom is based on knowledge, skill, and experience. One criterion for judging these factors is the length of time a professional has practiced medicine or number of times s/he has performed a procedure. For example, at a hospital, medical interns and residents often are directly supervised by attending physicians who already have completed their medical education and training and obtained practice privileges at a health facility (for a discussion of medical education and training see the section titled “Education, Training, and Licensure”). Also, an ophthalmologist who has performed few ocular laser surgeries likely would be supervised during surgery by an ophthalmologist who has performed such procedures numerous times, at least until the former can prove his/her proficiency.

A physician who has expertise or specialized knowledge in a certain area also may oversee or assume care for a patient of a physician with less or no such experience. For example, an emergency room doctor who diagnoses a patient with appendicitis likely would refer the case to a surgeon who can perform an appendectomy, and a family physician caring



for a patient exhibiting possible mental illness likely would make a referral to or consult with a psychiatrist.

Other health professionals besides allopathic and osteopathic physicians have oversight authority, including nurses, chiropractors, optometrists, and psychologists. Those practicing the medical subfield of physician assistance and the nursing subfield of licensed practical nursing, however, are prohibited by law from delegating to or supervising others (MCL 333.16215).

Physician Assistants

According to the law, practice as a physician assistant is a subfield of the practices of allopathic medicine and osteopathic medicine and surgery. As such, in rendering health care, PAs may not delegate tasks to other licensed or nonlicensed health professionals. However, given that s/he is properly skilled and experienced in a particular task, a PA may supervise or train other health professionals in that task as directed by his/her supervising physician.

The law specifies that a person may not engage in teaching or research that requires the practice of medicine unless licensed to do so. This means that physician assistants learning medical practices must be taught in a higher education setting by someone who is a licensed MD or DO (MCL 333.170111).

Nurses

The law allows registered nurses and advanced practice nurses to supervise and delegate to other nurses and nonlicensed health professionals (e.g., nurse aides). Like physicians, and in accordance with the law, whom nurses may oversee is based on knowledge, skill, experience, and the nature of the task; furthermore, the task must fall within the delegator's scope of practice. This means that nurses may delegate only those tasks that fall within the nursing scope of practice.

Experience in the practice of nursing is an important factor in determining which nurses may supervise. For example, an RN with ten years of experience



likely will be chosen for or assume a supervisory role before an RN with only five years of experience. Education also is an important factor. For example, an RN with a master's degree likely will supervise an RN with a bachelor's or associate's degree. The law also specifies that RNs may delegate to and supervise LPNs and other nonlicensed health professionals who have less extensive education and training than the supervising RN.

As with physicians, whether an RN delegates a task to another nurse or nonlicensed health professional depends on the degree of risk associated with the task. For example, a critical care RN participating in a surgery may choose to delegate suctioning a patient who is comatose with stable vital signs, but may assume the task her/himself if the patient has a closed head injury with rising cranial pressure.

Also, like physicians, nurses who delegate tasks within their scope of practice are responsible for their execution by other lesser skilled licensed or unlicensed nursing personnel. For example, if the critical care RN delegated the task of suctioning to an LPN, and the patient was harmed as a result of the LPN's actions, both the delegating RN and LPN could be held liable. While the RN's employer (e.g., a hospital or physician) also could be held liable as the facilitator of care, it cannot assume or remove the RN and LPN's liability, nor can it exempt them from their liability before the fact. As the Michigan Nurses Association notes in *Legal & Professional Regulation of Nursing Practice in Michigan*, "The more training a professional has, the higher the standard of care to which the professional will be held. Every professional and/or health care provider is personally liable for any breaches of the standard of care for which she/he is responsible."

Advanced practice nurses (APNs) further complicate the issue of nursing delegation and supervision. Many APNs, for example nurse midwives, have practices and a patient clientele independent from that of physicians (e.g., a nurse midwife may operate a birthing clinic); however, for care that extends beyond the nursing scope of practice, they still must secure physician supervision (direct or indirect), just like APNs who work in hospitals or other health facilities. Because APNs have extensive training



and education in their areas of expertise, however, physician supervision of these nurses often is limited, especially when compared to supervision of other nurses performing delegated medical tasks. The APN/physician relationship often can involve a special arrangement wherein physicians periodically review and approve the APN's work, consult when necessary, and direct or assume care for patients who, based on the APN's assessment, require emergency or other care that exceeds the APN's training, education, capability, or legal scope of practice (e.g., surgery or prescription medication).

As stated earlier (in the discussion of physicians' delegation authority), APNs do not necessarily have to work with health professionals who have a directly corresponding specialty (e.g., nurse midwives with OB-GYNs, nurse anesthetists with anesthesiologists [physicians], or nurse practitioners with family physicians). Rather, APNs work with physicians whose scope of practice ensures that the nurse will have sufficient supervision and oversight to protect patient health (e.g., a surgeon may supervise a nurse anesthetist). (See Appendix Three-A for a side-by-side comparison of the scopes of practice of APNs and physicians in corresponding specialties.)

Under Michigan law, APNs are considered RNs with advanced specialty training and education. This means that they may supervise and delegate nursing tasks, in accordance with the law, to other less-skilled RNs, LPNs, and nonlicensed personnel (e.g., nursing aides). APNs may delegate and supervise these health professionals regardless of whether they have an independent practice or are employed by a health facility (e.g., a hospital) or another health professional (e.g., a physician).

Unlike physician assistants, nurses may have independent practices or render nursing care independently. Depending on their training and skill level and the task at hand, they also may be required to work under the supervision and delegation of physicians or other nurses, or under the supervision and delegation of health professionals licensed in other areas, like dentistry and, less frequently, chiropractic, optometry, or psychology.



Psychologists, Chiropractors, and Optometrists

Psychologists, chiropractors, and optometrists generally practice independent from physicians. Because of their limited scope of practice, however, these health professionals sometimes develop professional relationships with an MD or DO to whom they refer patients whose care is beyond their expertise and from whom they sometimes receive referrals when appropriate. As a requirement of licensure, psychologists must undergo numerous hours of clinical education both before and after receipt of the Ph.D. in psychology under the direct supervision of other licensed psychologists (for more details, see the section titled “Education, Training, and Examination”). There is no such licensure requirement for chiropractors or optometrists, but students of these health professions typically do undergo supervised clinical experiences as part of the graduation requirements of their education institution’s curriculum.

All three of these types of health professionals, before they are fully licensed, must establish training and education relationships with (respectively) psychologists, chiropractors, and optometrists who offer both didactic education (coursework and instruction) and clinical education. These educators also supervise and delegate cases to their students.

Sometimes hospitals and other health facilities employ psychologists, chiropractors, and optometrists. As hospital employees, they must adhere to the health facilities’ protocols, including those relating to physician delegation and supervision, and may have to work under a physician’s oversight.

These health professionals, because they are licensed, may delegate to and supervise other licensed or nonlicensed health professionals (e.g., those undergoing didactic education or clinical training or office assistants) in accordance with the Public Health Code.



EDUCATION, TRAINING, AND EXAMINATION

When it comes to supervision, delegation, and scope of practice, MDs and DOs have the broadest responsibility and authority, but without a State of Michigan license, these and other health professionals, regardless of their background, legally may not practice.

The purpose of licensure¹⁵ is to protect the public by limiting the practice of certain health professions to qualified people; therefore, in the State of Michigan, licensure hinges on the satisfactory completion of various educational and training requirements, as determined by comprehensive examination that measures the potential licensee's knowledge. The remainder of this document focuses on health professional licensure and the various standards and requirements a person must meet to achieve and retain their health professional license. (For a side-by-side comparison of the education standards and requirements of different health professionals, see Appendix Three-B.)

The State of Michigan's administrative rules are the primary standards governing health professionals' education, training, and licensure requirements. As stated earlier, often these rules are based on policies and guidelines adopted by professional societies. However, because the process involved in revising administrative rules is complex and time-consuming, and because professional societies have substantial flexibility to revise policies and procedures, the two often do not correspond. Although the written administrative rules technically are law, several of the state's health profession boards actually impose different education, training, and licensure requirements than are specified in the rules. For the purposes of this document, all discussion reflects the boards' actual practices—not necessarily the language in the administrative rules.

¹⁵When using the term licensure, this document refers only the highest level of licensure a health professional may achieve. It does not refer to temporary or limited licenses of any type (e.g., limited licenses that allow medical school students to participate in a clinical experience or medical school graduates to participate in an internship), nor does it refer to reciprocal or endorsed licenses.



Doctor of Medicine

Licensure

To practice as a fully licensed MD in Michigan or engage in teaching or research that requires the practice of medicine, an applicant must obtain a state license, which must be renewed every three years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must have completed the following requirements:

- A degree in medicine from a school and program of medicine approved by the Michigan Board of Medicine
- Two years of postgraduate clinical training in a program at a hospital or institution (the State Board of Medicine must approve the clinical program and the hospital where the training takes place)
- Certification of satisfactory completion of the postgraduate clinical training

Program Study

Study at and graduation from a school of medicine usually involves four years of full-time, year-round study, which typically follows the receipt of an undergraduate degree. Generally, a first-year medical student will attend classes and receive instruction on the fundamentals of the basic science disciplines: gross anatomy, biochemistry, physiology, neuroscience, microbiology, histology/ pathology, radiology, pharmacology, genetics, and human development. Students also begin to integrate basic science content with clinically relevant cases. This phase of study is didactic, and it sets the stage for the problem-based learning and more advanced concepts that are the focus of the second and later years.

The next phase of study (the second year) focuses on problem solving. Students often work in groups, and studies are designed to facilitate the further integration of the basic sciences with clinically relevant cases. Education stresses independent learning and focuses on individual problem-solving skills. Students also study more advanced sciences: infectious disease; disorders of development and behavior; neoplasia; cardiovascular, pulmonary, urinary tract, metabolic, endocrine, reproductive, digestive, neurological, and musculoskeletal systems; and major mental disorders. In addition, they begin to examine the social



context of clinical decisions, including medical ethics, epidemiology, and health care organization and financing.

The third and fourth years allow students to begin community-based, physician-supervised learning experiences called clerkships. Students actually work with patients at clinical health care sites, including hospital-based and ambulatory care settings, geriatric centers, physicians' offices, out-patient clinics, and patients' homes. The clerkships revolve around the clinical sciences, including family practice, internal medicine, general surgery, pediatrics, obstetrics and gynecology, and psychiatry. Advanced clerkships in internal medicine and surgery follow the specialized clerkships.

Concurrent with their clerkships, students participate in a core competency experience, which provides students with structured learning and seminars on topics important to the care and health management of patients. At the conclusion of the required clerkship, students may take elective clerkships to further advance their experience. Upon completion of their four-year medical education, students are granted the degree of Medical Doctor (MD).

Postgraduate Study

The State of Michigan requires MDs to complete a two-year internship, which today commonly is incorporated into the residency program, before they can obtain their license to practice medicine. Like the clerkships, the medical residency (e.g., in family practice or psychiatry) revolves around the core clinical sciences. It usually takes place in a health care facility, like a hospital, and if the student has not yet done so, it allows him/her the opportunity to make important decisions about whether to specialize, and if so, in which field.

The residency program allows participants to study the medical specialty of their choice (for a list of medical specialty-granting boards, see Appendix Two). A residency can constitute two to five additional years of training (these numbers are for specialties discussed in this report) following graduation from a medical school. (For more information on residency programs, see the upcoming subsection, titled "Specialty Certification.")



Students who are uncertain of the field in which they want to specialize can participate in a “transitional year” program that allows them to complete a portion of their residency program before declaring their specialty.

Licensure Exam

In addition to obtaining a medical degree and completing a residency program, to obtain licensure as an MD potential candidates must pass a multi-part examination. The Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners (NBME) have established a single, three-step examination for medical licensure in the United States. The United States Medical Licensure Exam (USMLE) provides a common evaluation system for applicants for medical licensure and has replaced the Federation Licensing Examination (FLEX) and the NBME Parts I, II, and III (though both still are referred to in Michigan administrative rules).

The USMLE tests those seeking medical licensure in three areas of knowledge:

- *Step One* is a day-long multiple-choice test and focuses on basic medical principles (students usually take this examination at the end of their second year of medical school)
- *Step Two* is a day-long multiple-choice test and focuses on clinical diagnosis and disease origin and development
- *Step Three* is a day-long multiple choice test and focuses on clinical management (these tests used to be two days long)

Students often choose to complete the second and third exams after their fourth year of medical school or following their internship. To pass the USMLE, a person must score at least 75 points out of a possible 99. Special exam requirements also apply for foreigners wanting to practice medicine in the U.S.

Continuing Medical Education

To maintain their license, all MDs must complete 150 continuing medical education (CME) hours within the three-year period between license renewals. MDs may complete their CME activities through the following program types (the maximum credit hours that may be earned in each category during the three years follows each category):



- *Category One* Continuing medical activities with accredited sponsorship; tutorial experience; medical ethics; specialty board certification and recertification (150 hours)
- *Category Two* Continuing medical activities with nonaccredited sponsorship (36 hours)
- *Category Three* Tutoring medical physicians under category one; teaching medical physicians; teaching the allied health services (48 hours)
- *Category Four* Books, papers, publications, and exhibits (48 hours)
- *Category Five* Nonsupervised education; self-assessment; self-instruction; and participation with a hospital medical staff committee on quality patient care or utilization review (36 hours)
- *Category Six* Full-time participation in a graduate training program (150 hours)

For more detail concerning the number of CME credits a physician may earn by participating in each category, refer to the State of Michigan's Board of Medicine rules (R 333.2374-9). CME requirements for medical specialists are the same as general practitioners' requirements.

Specialty Certification

The training of a specialist begins after the physician has received his/her degree from a medical school, in what is called a residency (students generally complete their internship as part of this program). As mentioned previously, following medical school students typically pursue several years of medical residency training, which prepares them for independent practice in that specialty. To obtain a clinical specialty, an MD must fulfill the requirements specified by the American Board of Medical Specialties (ABMS). Resident physicians dedicate themselves for three to seven years to full-time experience in a hospital or ambulatory care setting, caring for patients under the supervision of experienced teaching specialists. Educational conferences and research experience are also part of that training. A doctor in training to be a specialist is called a resident, and the educational experience generally is geared to helping students pass board examinations. Residencies generally include the two-year State of Michigan internship requirement.



Each candidate for specialty certification must pass a written examination given by the specialty board after becoming a licensed physician. Fifteen of the twenty-four specialty boards also require an oral examination conducted by senior specialists in that field. Candidates who have passed the exams and fulfilled other requirements are then given the status of diplomate and are certified as specialists. A similar process is followed for specialists who want to become subspecialists. The following subsections briefly describe some of the specialty certification requirements for those examined in this document.

Anesthesiology (Physician)

The anesthesiology residency program generally includes four years of clinical training, including a clinical base year that provides residents with one full year of broad clinical education in medical disciplines. The remaining three years consist of training in basic and advanced anesthesia, including preoperative, intraoperative (during operation), and postoperative evaluation and management.

At least half of years two and three of the anesthesia residency program usually is spent on basic anesthesia training. Residents also receive training in the complex technology and equipment associated with the practice of anesthesiology. There must be documented evidence of direct faculty involvement through tutorials, lectures, and clinical supervision of beginning residents.

Anesthesia also encompasses the theoretical background and clinical practice of a variety of subspecialties. Exposure to these occupies at least seven months of the first two years of training. Residents undergo one-month rotations in obstetric, pediatric, neuro, cardiothoracic, and pain management anesthesia, and a two-month rotation in critical care. Residents also must spend one month each in experiences involving anesthesia for surgical patients and the postanesthesia care unit.

The fourth year of training consists of experiences involving advanced anesthesia. By the end of the four-year training, residents must have completed over 500 procedures in multiple areas (e.g., 40 anesthetics for vaginal delivery births, 100 for children, and 20 for major vascular



cases, etc.). They also must have participated in documented cases involving postoperative pain; application of specialized techniques for airway management; and central vein, pulmonary artery, peripheral artery, and other catheter placement.

Residents undergo regular evaluations, including a final evaluation that becomes a part of the resident's final record, and throughout the course of their training, residents take periodic examinations to assess their knowledge. Upon completion of the program, anesthesiology residents must pass a board certification exam to be a board-certified practitioner.

Family Practice (Physician)

Family practice residencies generally last three years. Residents are instructed on continuity of care and family-oriented comprehensive care in a family practice center (FPC), which is a private office setting. First year residents undergo an orientation to introduce them to health care. The center is structured to ensure that during their second and third years of training, residents have an opportunity to provide continuous health care to patients and develop their own practice base. To complete their training as a family physician, residents also must complete the following requirements:

- First-year residents must work at an FPC at least one half-day per week and see at least three patients per session
- Second-year residents must work at an FPC at least two half-days per week and see at least six patients per session
- Third-year residents must work at least three half-days per week at an FPC and see at least eight patients per session

Family practice residents also gain experience through a series of didactic and clinical training sessions in the following areas:

- *Human behavior and mental health* Mainly outpatient psychiatric experiences along with didactic sessions
- *Adult medicine* At least eight months of experience—six months of it in an inpatient setting, one month of it in critical care, and the rest in the prevention and detection of women's diseases
- *Maternity care* At least two months in maternity care, including prenatal care, delivery and labor management, and postpartum care; experience must include training in recognition and initial



management of high-risk patients; students also may pursue further training in this area as an elective later in their training

- *Gynecological care* At least 140 hours of care of nonpregnant women, including diseases of the female reproductive tract, growth and development, family planning, menopause, and early management of emergency situations
- *Surgical care* Experiences in diagnosis and management of surgical disorders and emergencies and making appropriate and timely referrals for specialized care, including
 - two months of general surgery and
 - 40 hours of care in orthopedic disorders, including a variety of acute and emergency musculoskeletal injuries and illnesses
- *Sports medicine* Didactic and clinical experience in the areas of pre-participation assessment, injury prevention, evaluation, management, and rehabilitation; the orthopedic aspects of sports medicine is included in the 140 hours required for general orthopedics
- *Emergency care* A structured educational experience of at least a one-month rotation in the delivery of emergency care, including didactic and clinical experience
- *Care of neonates, infants, children, and adolescents* An experience of at least four months, involving pediatric ambulatory clinic and inpatient experience
- *Community medicine* This experience has no specified time period and will involve occupational medicine and the examination of community health resources to help care for patients, prevent disease, and promote health
- *Care of the older patient* This may take place throughout the three years of training, but must involve experiences with the elderly in a hospital, the FPC, a long-term care facility, and the home
- *Diagnostic imaging and nuclear medicine* This experience involves learning how to use appropriate techniques and obtain specialty consulting in the use of diagnostic imaging and nuclear medicine therapy of body systems and organs
- *Practice management* At least 60 hours of formal instruction on practice management in both a didactic and practical setting
- *Electives* At least three but no more than six months of appropriately supervised electives



Family practice residents undergo regular evaluations, including a final evaluation that becomes a part of the resident's final record, and throughout the course of their training residents take periodic examinations to assess their knowledge. Upon completion of the program, family practice residents must pass a board certification exam before they can practice independently in this specialty area. The board certification must be renewed every six years by passing a multiple-choice national recertification examination.

Ophthalmology (Physician)

Ophthalmology residencies are four or five years in length, following four years of medical school. The first year of the educational program must include general training, or a clinical base year in all fields of medical care. The remaining three or four years of study include the following:

- *Classroom instruction in the basic and clinical sciences* Residents must receive at least 360 total hours of instruction in classroom education, including lectures and discussions on basic and clinical sciences
- *Case presentations and clinical conferences* At least eight hours per month are devoted to regularly scheduled formal teaching case presentations and clinical conferences attended by several faculty and a large number of residents
- *Pathology* Includes at least 50 hours of laboratory experience in gross and microscopic examination of pathological specimens, in addition to various lectures and pathology-related conferences

In addition to the above, ophthalmology residents must undergo multiple clinical experiences. The volume and variety of clinical ophthalmologic problems in children and adults must be sufficient to afford each resident a supervised experience with the entire spectrum of ophthalmic diseases so that the resident may develop diagnostic, therapeutic, and manual skills and judgment as to their appropriate use.

The clinical experience encompasses the following:

- *An outpatient experience* which involves each resident's participation in a minimum of 3,000 visits in which the resident performs a substantial portion of the examination and has responsibility for the



care of the patient. At least a thousand of these hours are supervised, and minimum of 1,500 outpatients are refracted by each resident (“refracted” means a glasses prescription was determined).

- *Surgical experience* Residents must participate in surgeries, to the extent determined by their program manager, in the areas of surgery and laser surgery for cataracts, strabismus, cornea, glaucoma, retina/vitreous, oculoplastic, and trauma
- *Systemic disease consultation experience* At least 150 patients must be seen in consultation during the course of three years of training

Residents undergo regular evaluations, including a final evaluation that becomes a part of the resident’s final record. Upon completion of the program, ophthalmology residents must pass a board certification exam to be a board-certified practitioner in this specialty area.

Psychiatry (Physician)

A complete psychiatry residency is four years in length. Many psychiatrists undergo additional training so that they can further specialize in such areas as child and adolescent psychiatry, geriatric psychiatry, forensic psychiatry, psychopharmacology, and/or psychoanalysis. Psychiatrists’ extensive medical training is meant to ensure they understand the body’s functions and the complex relationship between emotional illness and other medical illness.

The first year of the psychiatric residency program involves the following:

- *Internal medicine, family practice, and/or pediatrics* Training must be at least four months and in a clinical setting that provides comprehensive and continuous patient care (neurology rotations may not be used to fulfill the four-month requirement)
- *Emergency medicine rotation* Up to one month, as long as the experience predominantly involves medical evaluation and treatment, as opposed to surgical procedures
- *Psychiatry* Not more than six and less than eight months
- *Neurology* At least two months

The second through fourth years of the residency involve both didactic and clinical training. The former



- teaches residents to critically appraise major theories and views in psychiatry;
- presents
 - biological, psychological, sociocultural, and other factors that influence physician and psychological development throughout life, and
 - the history, prevalence, diagnosis, treatment, and prevention of all psychiatric conditions; and
- provides an understanding of
 - the diagnosis and treatment of neurologic disorders commonly encountered in psychiatric patients (e.g., dementia, headaches, head trauma, multiple sclerosis, and Parkinson's disease),
 - the use and reliability of generally accepted diagnostic techniques,
 - when and how to refer, and
 - the financing and regulation of psychiatric practice.

The latter—clinical training—involves the following:

- Learning clinical diagnosis for all age groups, including interviewing; history taking; physical, neurological, and mental status examination; and complete systemic recordings
- Relating history and clinical findings to relevant biological, psychological, and social issues associated with etiology and treatment
- Formulating a different diagnosis and treatment plan for all conditions
- Rendering types of therapy, including short and long-term psychotherapy, pharmacological and somatic therapies, and drug and alcohol detoxification
- Providing continuous care for a variety of patients from different age groups
- Consulting on a psychiatric basis in a variety of medical, surgical, and community settings
- Providing care and treatment for the chronically mentally ill
- Understanding psychiatric administration, including leadership of interdisciplinary teams
- Acquiring knowledge of the indications for and limitations of more common psychological tests
- Critically appraising scientific and professional literature
- Teaching psychiatry to students in the health professions



Other requirements include:

- Two months of supervised clinical experience in the diagnosis and treatment of neurological patients
- At least nine months but not more than eighteen months of inpatient training in the assessment, diagnosis, and treatment of a variety of primarily adult psychiatric patients
- At least one year of supervised clinical experience in the assessment, diagnosis, and treatment of outpatients
- At least two months in organized experiences dealing with child and adolescent psychiatry
- At least two months involving consultation/liaison responsibilities
- Involvement in an organized 24-hour psychiatric emergency services program that is responsible for crisis management and triage of psychiatric patients
- Participation in community-based health activities, including consultation with at least one agency
- Clinical management of geriatric patients with a variety of psychiatric disorders, including familiarity with long-term care settings
- Addiction psychiatry
- Forensic psychiatry (per the American Psychiatric Association, forensic psychiatrists deal with the legal system, including both the civil and criminal aspects, becoming expert in the evaluation of competency and insanity and providing court testimony; also, those with this specialty have clinical experiences with patients in jails and prisons)
- Evaluation and treatment of couples, families, and groups
- Evaluation and management of danger (e.g., whether the patient is dangerous to self and others)
- Utilization review and total quality management
- Collaboration with psychologists, psychiatric nurses, social workers, and other professional and paraprofessional mental health personnel

Residents undergo regular evaluations, including a final evaluation that becomes a part of the resident's final record. Upon completion of the program, psychiatric residents are eligible for the board examination and specialty certification.



Obstetrics-Gynecology (Physician)

Resident education in obstetrics-gynecology requires four years of education, the first of which provides general medical training. The latter three focus on reproductive health care and ambulatory general health care for women, including health maintenance, disease prevention, diagnosis, treatment, consultation, and referral.

After the first year of their education programs, residents participate in an ambulatory care environment until they have completed all residency requirements. It involves a continuing physician/patient relationship with a panel of patients for at least one half-day per week. As part of this training, residents provide care in remote/rural locations for no longer than two months each year.

Meanwhile, residents work to complete the requirements of a core curriculum that includes the following:

- Patient evaluation, examination, diagnosis, and treatment
- Education through patient rounds, case conferences, journal clubs, and basic sciences
- Improving judgement concerning the need for surgery and recognition and management of complications
- Classroom and clinical educational experience in all methods of family planning, including contraception; students must know how to perform such procedures as sterilization and be able to discuss natural methods of birth control; students morally opposed to abortion are not required to receive training in or provide this procedure
- Classroom and clinical education concerning menopause

Residents' obstetric educational experiences also must include care for high-risk patients, study of genetics, participation in complex deliveries (e.g., breech, multifetal, and cesarean deliveries), basic obstetric anesthetic principles, management of critically ill patients, immediate care of newborns, familiarity with the full range of obstetric diagnostic procedures, and the emotional and psychosocial effects of pregnancy.

Gynecological educational experiences must address the full range of medical and surgical gynecology for all groups: diagnosis and management



of pelvic floor and urinary tract dysfunction; oncology; diagnosis and nonsurgical treatment of breast disease (including fine-needle aspiration); clinical skills in family planning, reproduction, psychosomatic and psychosexual counseling; the full range of commonly employed gynecologic diagnostic procedures; and care management for critically ill patients.

Within both obstetrics and gynecology, residents must learn emergency care; the basics of epidemiology; statistics, data collection and management; the use and assessment of medical literature; ethics and medical jurisprudence; community medicine; health care systems; and information processing and decision making.

Residents undergo regular evaluations, including a final evaluation that becomes a part of the resident's final record. Upon completion of the program, OB-GYN residents must pass a board certification exam before they can practice independently in this specialty area.

Doctor of Osteopathic Medicine and Surgery

Licensure

To practice as a DO in Michigan, a candidate must obtain a state license, which must be renewed every three years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must have completed the following requirements:

- A degree in osteopathic medicine from a school and program of osteopathic medicine that is accredited and approved by the American Osteopathic Association
- One year of postgraduate clinical training in an internship program at a hospital or other institution; the American Osteopathic Association must approve the internship program and accredit the facility where it takes place
- Certification of satisfactory completion of the postgraduate clinical training

Limited educational licenses allow the holders to engage in the practice of osteopathic medicine as part of the postgraduate medical training program (i.e., the one-year internship). A person must have completed



specific postgraduate requirements and be approved for the one-year training program before they can obtain this limited license.

Program Study

Study and graduation from a school of osteopathic medicine closely mirrors that of allopathic medical schools and usually involves four years of full-time, year-round study, after obtaining an undergraduate degree. Generally, a first-year medical student will attend classes and receive instruction on the fundamentals of the basic science disciplines: gross anatomy, biochemistry, physiology, neuroscience, microbiology, histology/pathology, radiology, pharmacology, genetics, and human development. Students also begin to integrate basic science content with clinically relevant cases. This phase of study is didactic, and it sets the stage for the problem-based learning and more advanced concepts that are the focus of the second and later years.

The next phase of study (the second year) focuses on problem solving. Students often work in groups, and studies are designed to facilitate the further integration of the basic sciences with clinically relevant cases. Education stresses independent learning and focuses on individual problem-solving skills. Students also study more advanced sciences: infectious disease, disorders of development and behavior; hemastopoietic/neoplasia; cardiovascular, pulmonary, urinary tract, metabolic, endocrine, reproductive, digestive, neurological, and musculoskeletal systems; and major mental disorders. They also begin to examine the social context of clinical decisions, including medical ethics, epidemiology, and health care organization and financing.

The third and fourth years allow students to begin community-based, physician-supervised learning experiences called clerkships. Students work with patients at clinical health care sites, including hospital-based and ambulatory care settings, geriatric centers, physicians' offices, outpatient clinics, and patients' homes. The clerkships revolve around the clinical sciences, including family practice, internal medicine, general surgery, pediatrics, obstetrics and gynecology, and psychiatry. Advanced clerkships in internal medicine and surgery follow the specialized clerkships.



Concurrent with their clerkships, students participate in a core competency experience, which provides students with structured learning and seminars on topics important to the care and health management of patients. At the conclusion of the required clerkships, students may take elective clerkships to further advance their experience. Upon completion of their four-year medical education, students are granted the degree Doctor of Osteopathic Medicine (DO).

Postgraduate Study

Following the four-year medical education program is the one-year internship already mentioned, wherein DOs continue their clinical education in the general clinical sciences. Next, the DO typically enters a residency program to pursue two to six additional years of training in the medical specialty of his/her choice.

Licensure Exam

In addition to the above education and training requirements, to obtain licensure as a DO a candidate must complete a three-part examination called COMPLEX-USA, developed by the National Board of Osteopathic Medical Examiners, Inc. The test covers the following:

- *Level One*, a two-day, multiple-choice examination, covers the basic medical sciences of anatomy, behavioral science, biochemistry, microbiology, osteopathic principles, pathology, pharmacology, physiology, and other areas relevant to medical problem solving. Level One is usually taken at the end of the second year of medical school.
- *Levels Two and Three* both are two-day, multiple-choice examinations that cover the clinical disciplines of community medicine/medical humanities, emergency medicine, internal medicine, obstetrics/gynecology, osteopathic principles, pediatrics, psychiatry, surgery, and other areas necessary to solve medical problems. Level Two usually is taken in the fourth year of medical school, just before graduation; Level Three typically is taken at the end of the one-year internship.

Those taking the exam must pass all three parts, an accomplishment which requires a score of at least 350 points out of a possible 800.



Continuing Education

To maintain a DO license, a candidate must complete 150 continuing education (CE) hours within the three-year period between license renewals. DOs can complete their CE credits from three different education categories, and within each of the three categories are several subcategories of education:

- *Category One* DOs may complete all 150 education credits by participating in formal osteopathic education programs, including
 - up to 90 hours writing scientific papers and publications (10 credits per publication);
 - 90 hours teaching medicine;
 - 90 hours inspecting osteopathic medical education programs; or
 - 90 hours in peer review activities in an osteopathic medical institution.
- *Category Two* DOs also may opt to complete up to 90 CE credits by
 - conducting peer review activities in an allopathic medical institution;
 - 90 hours of home study;
 - conducting scientific exhibits (10 hours per exhibit); or
 - completing 90 hours in formal non-osteopathic programs (e.g., internal medicine, general practice, general surgery, obstetrics, pediatrics, pathology, radiology, and outpatient or emergency care) that do not include osteopathic principles and practice.
- *Category Three* These programs involve postgraduate clinical training programs, and a DO may complete no more than 50 credit hours for participation as a full-time student (attending classes not less than five months per year).

State of Michigan rules specify that a DO must complete all 150 CE credits with at least 10 CE credits from category one, up to 90 credits from category two, and up to 50 credits from category three. For certified specialists, at least one-third of the continuing education credits must be in the specialty field.

Specialty Certification

For the most part, the same medical specialties exist for both MDs and DOs (see Appendix Two for a total listing of the specialty boards governing



these fields), but the allopathic and osteopathic professional societies use separate (although similar) standards for their members' specialty certification. To obtain clinical specialty certification, a DO must fulfill the requirements specified by the appropriate osteopathic certifying board. (The American Osteopathic Association must also certify the programs in which residents are trained.) The training of a specialist begins after the physician has received his/her degree from a medical school, in what is called a residency. The residency follows the one-year internship, wherein students rotate through experiences in different specialty areas, e.g., anesthesiology, family practice, ophthalmology, psychiatry, or obstetrics-gynecology. Including the internship, resident physicians participate in two to seven years of full-time experience in a hospital or ambulatory care setting, caring for patients under the supervision of experienced teaching specialists. Educational conferences and research experience are also part of that training. A doctor in training to be a specialist is called a resident, and the educational experience generally is geared to helping students pass board examinations.

Each candidate for certification must pass a written examination given by the specialty board. Most specialty boards also require an oral examination conducted by senior specialists in that field. Candidates who have passed the exams and other requirements are then given the status of diplomate and are certified as specialists. A similar process is followed for specialists who want to become subspecialists.

With respect to curriculum and educational content, residency programs for DOs closely resemble those for MDs, although some of the specific requirements (e.g., length of study in a certain area or number of procedures required) may differ. (See the "Specialty Certification" subsection in the previous section, "Doctor of Medicine," for a more detailed explanation of the different specialty fields.)

Physician Assistants

Licensure

To practice as a PA in Michigan, a candidate must obtain a state license, which must be renewed every six years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must



have (1) completed at least a two-year study program, the content of which parallels in many ways the curriculum followed in medical schools and (2) passed the licensure examination conducted and scored by the National Commission on Certification of Physician Assistants (NCCPA).

Program Study

According to the American Medical Association's Division of Allied Health Education and Accreditation, the exact curriculum for a PA education program may be determined by the individual sponsoring institution, but the division recommends that the duration be 24 full-time months, or about four academic years of study. Some programs lead only to a physician-assistant certificate, but many result in either an associate's or bachelor's degree. Some programs also allow PAs to obtain a master's degree in their field. The core curriculum of a basic PA education program includes the following:

- *Basic medical sciences* Study of human anatomy, physiology, pharmacology, pharmacotherapeutics, and clinical laboratory medicine
- *Applied behavioral sciences* Basic counseling skills to help patients cope with illness and injury, follow prescribed treatment regimens, and develop healthier patterns by modifying their attitudes and behavior
- *Clinical didactic instruction* Techniques of interviewing and eliciting a medical history, performing a basic medical examination, and presenting data in oral and written form; instruction also should include pathophysiology, clinical medicine, and preparation for prescribing medicines
- *Coursework on the role of a physician assistant*

Approximately 2,000 hours (about one full year) of supervised clinical clerkships or rotations is also required, which involve experiences in medical and surgical settings, including emergency medicine, family medicine, general internal medicine, general surgery, geriatrics, obstetrics and gynecology, pediatrics, and psychiatry/behavioral medicine. Clinical practicums include ambulatory, emergency, inpatient, and long-term care settings.¹⁶

¹⁶Training and education requirements for anesthesiology assistants and medical assistants differ from those of PAs.



Postgraduate Study

The Commission on Accreditation of Allied Health Education Programs specifies no postgraduate study requirements, although some PAs' employers may require a formal program of supervision and training before a PA may be granted full practice privileges.

Licensure Exam

Licensure candidates must pass the certifying examination conducted and scored by the NCCPA. The exam—the Physician Assistant National Certifying Examination (PANCE)—consists of 360 multiple-choice questions, answered in three test booklets in three increments of two hours. The exam covers seven topics: history taking and performing physical examinations, using laboratory and diagnostic studies, formulating most likely diagnoses, health maintenance, clinical intervention, clinical therapeutics, and applying basic scientific concepts. Passing scores for the exam are determined each year by an independent standard-setting committee.

Continuing Education

To maintain the NCCPA certification, and thus licensure, PAs must complete 100 continuing education (CE) credits every two years. The credits may fall into both or either of the following areas:

- *Category One* Completion of CE hours approved by the American Association of Physician Assistants, the American Association of Family Practitioners, the American Medical Association, or the American Organization of Continuing Medical Education
- *Category Two* Participation in a non-approved program, a clinically related self-learning activity, or a medically related postgraduate course

Every six years, the NCCPA requires most PAs to recertify, though the State of Michigan does not require a person to meet the NCCPA's recertification requirements unless his/her PA license has lapsed for more than three years. The State of Michigan does, however, require PAs to reregister with the NCCPA in the second and fourth year of their license's six-year duration.



Specialty Certification

In the State of Michigan the term physician assistant encompasses all PAs, including those who focus on primary health care and those who have specialized as anesthesiology, pathology, surgical, medical, and other assistants. PAs with such specialties generally have undergone additional training and education (usually at least one year) or have participated in education programs specifically designed to result in the specialization. For example, some programs result in the receipt of an anesthesiologist assistant certificate, rather than a physician assistant certificate. To obtain a specialty certification, a person generally must complete (in addition to the NCCPA exam) a specific course of study and pass an examination administered by the appropriate NCCPA specialty board.

Nurses

Licensure

To practice as a practical or registered nurse in Michigan, a candidate must obtain a state license, which must be renewed every two years. To obtain the license, the candidate must complete an application and pay a fee. Licensure candidates also must have completed the following requirements:

- Graduation from a U.S. or foreign practical or registered nurse education program that is equivalent or substantially equivalent to a practical or registered nurse education program approved by the Board of Nursing; applicants for licensure must have completed the core curriculum for practical or registered nurse applicants (see “Program Study,” below)
- Passing of a licensure exam

Program Study

The Board of Nursing stipulates that the course content for LPN and RN nursing curricula must promote student growth in the following areas:

- Understanding the roles and responsibilities of the members of the nursing profession
- Applying the principles of nursing and the sciences which are basic to nursing practice in the develop of patient or client care plans



- Understanding the principles of effective human relations and demonstrating the ability to use them in nursing situations
- Recognition of the physical, psycho-social, and spiritual needs of patients or clients and the provision of remedial measures as indicated
- Understanding of the manifestations of health and diseases and the initiation and application of the principles underlying the nursing care provided
- Developing skills and abilities in the administration of all aspects of nursing care, including communications, problem solving, understanding legal and professional responsibilities, and the working relationships with other health care providers
- Understanding and protecting the rights of patients or clients

LPN and RN nursing programs also must provide courses that address the following:

- The legal scope of practice of the registered nurse
- The standards of conduct for members of the nursing profession
- Historical perspectives of nursing and current legal/ethical issues
- Licensure requirements

Licensed Practical Nurse

LPN education programs must be at least 30 weeks in duration (they generally are approximately one year long and end in a certificate of completion), and receipt of a high school diploma generally is a prerequisite. In addition to addressing the above requirements, the programs include courses in both theory (e.g., professional values and critical thinking) and clinical practice (e.g., patient assessment, illness and disease management, and use of health care technologies) in not less than three of the four areas of nursing included in the core curriculum for practical nurse applicants.

The practical nurse curriculum involves courses in both instruction and planned clinical learning in the following areas:

- *Medical nursing* The study of nursing care for the adult patient, both male and female, who is in the acute or chronic phases of a medical illness
- *Obstetrical nursing* The study of nursing care for women in the



antepartum, labor/delivery, and postpartum phases of pregnancy, which includes the care of the newborn infant (this may be referred to as maternal/child nursing); gynecological nursing alone does not fulfill this obstetric nursing education requirement

- *Pediatric nursing* The study of nursing care for children whose ages range from birth through adolescence and who are receiving nurse care for both medical and surgical reasons; it does not include newborn nursing education
- *Surgical nursing* The study of nursing care for a surgical procedure

The Board of Nursing administrative rules stipulate that every member of a nursing faculty providing didactic LPN instruction must hold at least a bachelor's degree in nursing science.

Registered Nurse

RN education programs generally entail completion of an associate's degree (usually two years) or bachelor's degree (generally four years) and include courses in theory and clinical practice. The registered nurse curriculum also involves courses in medical, obstetrical, pediatric, and surgical nursing as well as instruction and clinical learning in psychiatric nursing, the nursing care of patients with acute or chronic psychiatric disorder. (This also may be referred to as mental health nursing.) Education that covers only areas of mental retardation, organic brain syndromes, or neurological disorders does not fulfill the psychiatric nursing education requirement.

Specialty Certification

The Michigan Board of Nursing, pursuant to the Public Health Code, allows for the specialty certification of RNs as Advanced Practice Nurses (APNs), particularly nurse anesthetists, nurse midwives, and nurse practitioners. The certification must be renewed every two years.

Nurse Anesthetist

To become certified as a nurse anesthetist, the Michigan Board of Nursing specifies that an RN must do the following:

- Hold a current and valid license to practice nursing in Michigan



- Submit an application for certification in a specialty area of nursing and pay the required fee
- Meet the standards set by the Council on Certification of Nurse Anesthetists (CCNA) or the Council on Recertification of Nurse Anesthetists (CRNA), which include the following:
 - Possession of a bachelor’s degree or higher in nursing or a closely associated area
 - Graduation from a nurse anesthesia educational program, a course of study which may result in a master’s degree. These programs are generally between 24 and 36 months in length and include at least 450 hours of didactic instruction and 800 hours of clinical work in anesthesia.
 - Completion of the certification examination administered by the CCNA
 - Compliance with criteria for biennial recertification, as defined by the CCNA, including evidence of (1) active practice as a CRNA, (2) appropriate continuing education, and (3) verification of the absence of mental, physical, or other problems which could interfere with the practice of anesthesia

Nurse Midwife

To become certified as a certified nurse midwife (CNM), the Michigan Board of Nursing specifies that an RN must do the following:

- Hold a current and valid license to practice nursing in Michigan
- Submit an application for certification in a specialty area of nursing and pay the required fee
- Meet the standards set by the American College of Nurse Midwives (ACNM), which include the following:
 - Possession of a bachelor’s degree or higher in nursing or a closely associated area
 - Graduation from a nurse midwife educational program accredited by the ACNM (may result in a master’s degree)
 - Completion of the certification examination administered by the ACNM
 - Compliance with criteria for continuing competency assessment, including evidence of (1) active practice as a CNM and (2) appropriate continuing education



Nurse Practitioner

To become certified as a nurse practitioner, the Michigan Board of Nursing specifies that an RN must do the following:

- Hold a current and valid license to practice nursing in Michigan
- Submit an application for certification in a specialty area of nursing and pay the required fee
- Have a bachelor of science degree or higher in nursing
- Successfully complete a nine-month (one academic year) formal advanced program for nurses that consists of a combination of didactic and clinical training, with a minimum of 120 hours (or 30 percent of the program's hours, whichever is less) devoted to classroom theory, and a minimum of 360 hours (or 30 percent of the program's hours, whichever is less) devoted to supervised clinical practice in the specialty area
- Meet advanced practice certification standards of one of the numerous advanced and other nursing professional entities (e.g., American Nurses Credentialing Center, National Certification Board of Pediatric Nurse Practitioners and Nurses, American Academy of Nurse Practitioners, etc.)

Other

Some RNs obtain certificates from professional organizations in specialties not recognized by the State of Michigan (e.g., a surgical specialty). These certificates also require completion of a specified course of study and examination. For example, a nurse may specialize in pediatrics, oncology, or another area. An RN who specializes is not considered an APN unless s/he meets the requirements specified in the administrative rules and law.

Licensure Exam

A candidate for licensure as an RN or LPN must take the National Council Licensure Examination (NCLEX) for their respective licensure level. In order to take the NCLEX-RN or NCLEX-PN examination, candidates must establish that they have completed a registered nurse education program that is acceptable to the Board of Nursing.

Every candidate who takes the NCLEX must answer a total of 60 multiple-choice questions. Test subjects include assessment, analysis, planning,



implementation, evaluation, environment, physiological integrity, and health maintenance. Test questions also place emphasis on managed care, delegation, wellness, and pharmacology. The NCLEX is a pass/fail exam, and the council determines each year what the standards should be.

Continuing Education

RNs and LPNs must recertify every two years, and within those two years they must complete at least 25 continuing education hours, as specified in the Board of Nursing rules (R 338.10602). The Michigan Board of Nursing requires APNs to complete within their two-year certification period the following requirements, in addition to those required of RNs:

- Nurse anesthetists must recertify according to the requirements of the CCNA
- Nurse midwives must complete either (1) the continuing competency assessment requirements of the ACNM or (2) 20 continuing education units in the nursing specialty field
- Nurse practitioners must either (1) meet the recertification requirements of one of numerous professional associations or (2) complete 40 continuing education units in the specialty field

Psychologists

Licensure

To practice in Michigan as a fully licensed psychologist, a candidate must obtain a state license, which must be renewed every three years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must meet the following requirements:

- Possess either a doctoral degree in psychology or a closely related field from an institution approved by the Board of Psychology
- Complete two years of postdoctoral clinical study in psychology
- Pass a written exam administered by the State of Michigan

Program Study

For potential licensees, the doctoral degree in psychology includes instruction in research design and methodology, statistics, psychometrics, and scientific and professional ethics and standards. It also must include at least one graduate course, taken for credit, in three of the four following areas:



- *Biological bases of behavior* Physiological psychology, comparative psychology, neuro-psychology, sensation and perception, and psychopharmacology
- *Cognitive-affected bases of behavior* Learning, thinking, motivation, and emotion
- *Social bases of behavior* Social psychology, group processes, and organizational systems theory
- *Individual differences* Personality theory, human development, and abnormal psychology

The degree also must include at least one course in both assessment and treatment. Seventy-five percent of the hours required for the degree must have mostly psychological content. The dissertation and internship are excluded from what is considered coursework, but may be required for degree completion.

State of Michigan law also requires completion of an internship program that provides participants with substantial opportunities to carry out major professional functions under appropriate supervision. The internship must be an integrated component of the degree-completion program and must take place in an organized health care setting. The internship also must do the following:

- Require the applicant to work at least 20 hours per week
- Require at least 2,000 clock hours of psychological work
- Involve supervision by a psychologist who is (1) licensed or eligible for Michigan licensure or (2) licensed or certified at an independent practice level where the internship takes place

Postgraduate Study

In addition to the above, for full licensure psychologists must acquire two years of postdoctoral experience in the practice of psychology, and the following criteria must be met:

- The experience must constitute at least 4,000 hours
- The participant may not count more than 2,080 hours of acceptable experience in any one calendar year
- The experience must require the participant to accumulate at least 16 hours per week



- The applicant must function as a psychologist using generally accepted applications of psychological knowledge and techniques acquired during education and training
- The experience must be in an organized health care setting or another arrangement approved by the board

Licensure Exam

To obtain full licensure as a Michigan psychologist, a candidate must achieve a passing score (one standard deviation below the mean of doctoral candidates) on the Examination for Professional Practice in Psychology (EPPP). The test has 200 multiple-choice questions, which cover the following subject areas: assessment and psychological diagnosis, biological bases of behavior, cognitive-affective bases of behavior, ethical/legal/professional issues, growth and life span development, research methods, social and multicultural bases of behavior, and treatment/intervention.

Continuing Education

The State of Michigan issues no continuing education requirements for psychologists.

Chiropractors

Licensure

To practice as a chiropractor in Michigan, a candidate must obtain a state license, the first of which must be renewed after three years; all subsequent renewals last for two years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must have graduated from a school or college of chiropractic approved by the Michigan Board of Chiropractic and passed an approved examination.

Program Study

A chiropractic college approved by the Michigan Board of Chiropractic must prepare the health provider in assessment of conditions, including spinal analysis, to determine subluxations or misalignments of the spine, which either indicate the necessity for chiropractic care or the need to consult with or refer to another health care provider. Chiropractors



generally undergo six years of formal study and training. The first two years typically encompass education in the basic sciences and clinical disciplines, including such training as taking clients' chiropractic histories, recording the information, and learning basic treatment techniques. The remaining four years typically involve resident study, including clinical experience under strict supervision, with the emphasis on identifying and determining the existence and treatment of disease. Approximately half of the four-year clinical education is spent in a clinic setting, while the remainder typically is spent in the classroom.

Michigan's chiropractic colleges must require at least 4,000 hours (approximately four academic years) of education, and the curriculum must be based in the basic sciences and principles and practices of chiropractic. Also, each student must be provided with actual clinical experience in the examining, analysis, and care of patients.

The clinical experience must involve supervision by and work with a trained chiropractor and must include the following:

- 25 patient examinations, at least 10 of which must be nonstudent patients (examinations must include a chiropractic examination, case history, and x-ray and training must include use of analytical procedures and equipment)
- 250 patient visits incorporating the use of commonly accepted analytical procedures (patient visits must include chiropractic adjustive techniques)
- Written interpretation of at least 30 different x-rays, either slide or film
- 500 hours of practical clinical experience (caring for patients in a clinic)
- Training in rehabilitative procedures

Postgraduate Study

There are no State of Michigan postgraduate study requirements for chiropractors.

Licensure Exam

In addition to the above education requirement, to obtain licensure as a chiropractor a candidate must achieve a passing score on Parts I, II, and



III of the National Board of Chiropractic Examiners (NBCE) licensure examination. The three-day, written exam assesses competency in all the following areas: basic science subjects (general anatomy, spinal anatomy, physiology, chemistry, pathology, microbiology, and public health); clinical subjects (general diagnosis, neuromusculoskeletal diagnostic imaging, principles of chiropractic, chiropractic practice, and associated clinical sciences); clinical competency (case history, physical examination, neuromusculoskeletal examination, roentgenologic examination, clinical laboratory and special studies, diagnosis or clinical impression, chiropractic technique, supportive techniques, and case management).

Continuing Education

Within the two years that the chiropractic license is valid, the licensee must complete 24 hours of continuing education. As stated previously, new chiropractors who have completed their initial licensure may wait three years before the first licensure renewal, but these chiropractors must complete 36 hours of continuing education, an average of 12 hours each year. (An hour of continuing education credit in chiropractic is 50 minutes.)

Optometrists

Licensure

To practice in Michigan as a fully licensed optometrist, a candidate must obtain a state license, which must be renewed every two years. Obtaining the license involves completing an application and paying a fee. Licensure candidates also must meet the following requirements:

- Graduation from a college or school of optometry approved by the Michigan Board of Optometry
- Passing the Michigan Board of Optometry examination, as well as the exam administered by the National Board of Examiners in Optometry (NBEO)

Program Study

The optometric course of study generally includes four years of post-baccalaureate instruction in the following:

- *Vision sciences* Optics, visual processes, rehabilitation, vision training, and assessment procedures



- *Practice management*
- *Basic sciences* Anatomy, physiology, microbiology, immunology, microchemistry, general pathology, systemic disease, health assessment, public health and epidemiology, and general pharmacology
- *Basic ocular sciences* Ocular anatomy; physiology; microbiology; neuro-ophthalmology; ocular pathology, diseases, and assessment; ocular pharmacology; and pharmaceutical therapeutics

Primarily in the fourth year, optometry students participate in a full-time clinical experience. Some third-year students also may opt to participate in a part-time clinical experience. These experiences may occur in on- or off-campus clinics or in private optometric practices. Students average approximately 2,000 total hours of contact with patients.

Postgraduate Study

The State of Michigan does not require optometry candidates to participate in postgraduate studies.

Certification

To administer a topical diagnostic pharmaceutical agent, an optometrist must obtain a State of Michigan certificate. To do so, a person must submit an application and pay a fee. S/he also must do the following (in addition to the general requirements for optometry licensure):

- Successfully complete a course of study in clinical pharmacology at an Optometry Board-approved school (involves completion of at least 60 classroom hours, 30 of which must be allocated toward ocular pharmacology and emphasize the systemic effects of and reactions to the described drugs; it also must include study of emergency management and referral)
- Establish a Board-of-Optometry-approved emergency treatment plan for the management and referral of patients who experience any adverse drug reaction
- Submit to a Board-of-Optometry-approved examination on the subject of general and ocular pharmacology as it relates to the practice of optometry (applicant must achieve a score of 75 percent or must retake the exam)



- Successfully complete a course in advance cardiac life support or in basic life support that is offered by a Board-of-Optometry-approved organization

To administer and prescribe a therapeutic pharmaceutical agent, an optometrist also must obtain a State of Michigan certificate. To do so, a person must submit an application and pay a fee as well as comply with the following requirements (in addition to the general requirements for optometry licensure):

- Meet the certification requirements to administer diagnostic pharmaceutical agents (listed previously)
- Successfully complete a course of study relating to the didactic and clinical use of therapeutic pharmaceutical agents at a Board-of-Optometry-approved school (this involves obtaining credit for ten academic quarter hours, seven semester hours, or one hundred classroom hours of study in subjects relating to the didactic and clinical use of optometry-related therapeutic pharmaceutical agents)
- Establish a board-approved emergency management plan

Licensure Exam

The National Board of Examiners in Optometry (NBEO) exam has three parts:

- *Basic sciences* 435 multiple-choice questions administered across three sessions of three-and-three-quarter hours
- *Clinical sciences* 435 multiple-choice questions administered across three sessions of three-and-three-quarter hours; the questions assess application of the knowledge of basic science to the preventing, ascertaining the presence of, treating, and managing clinical visual conditions
- *Patient care* Over ten hours of station-based, written, multiple-choice, and performance test problems that assess the candidate's case management skills, including observation of the condition, treatment, and prognosis for five patients; visual recognition and interpretation of clinical signs; and clinical skills, including communication and interpretation of clinical findings



To obtain full licensure as a Michigan optometrist, the State of Michigan requires those seeking an optometry license to complete and pass only the first two. Rather than complete part three of the NBEO licensure exam, candidates for licensure—with the exception of optometrists who have been licensed in another state more than five years—must complete a clinical exam administered by the State of Michigan.

Continuing Education

Within the two years before the optometric license expires, the licensee must complete 24 hours of continuing education. The Michigan Board of Optometry has approved the following for continuing education credit:

- Successful completion of a course or courses offered for credit in an approved optometry school
- Successful completion of a continuing education program offered at an approved optometry school
- Attendance at a continuing education program approved by the board
- Renewal of a license held in another state that requires continuing education for renewal that is similar to that required in Michigan
- A continuing education program approved by the board, upon evaluation
- One hour of continuing education may be earned for each hour involved in the presentation of an approved continuing education program





APPENDICES

Appendix One: Michigan Statutory Definitions of Health Professions

Appendix Two: Comparison of Allopathic and Osteopathic Medical Specialty Certification Bodies

Appendix Three: Comparisons of Health Professions

Three A: Health Professionals' Scopes of Practice

Three B: Health Professionals' Education, Training, and Examination





APPENDIX ONE: MICHIGAN STATUTORY DEFINITIONS OF HEALTH PROFESSIONS

Practice of medicine [MCL 333.17001]

The diagnosis, treatment, prevention, cure, or relieving of a human disease, ailment, defect, complaint, or other physical or mental condition, by attendance, advice, device, diagnostic test, or other means, or offering, undertaking, or attempting to do, or holding oneself out as able to do, any of these acts.

Practice of osteopathic medicine and surgery [333.17501]

A separate, complete, and independent school of medicine and surgery utilizing full methods of diagnosis and treatment in physical and mental health and disease, including the prescription and administration of drugs and biologicals, operative surgery, obstetrics, radiological and other electromagnetic emissions, and placing special emphasis on the interrelationship of the musculoskeletal system to other body systems.

Practice as a physician's assistant [MCL 333.17001]

The practice of medicine or osteopathic medicine and surgery performed under the supervision of a physician or physicians licensed under this part or part 175. Practice as a physician's assistant is a health profession subfield of the practice of medicine and osteopathic medicine and surgery [MCL 333.17008].

Practice of nursing [MCL 333.17201]

The systematic application of substantial specialized knowledge and skill, derived from the biological, physical, and behavioral sciences, to the care, treatment, counsel, and health teaching of individuals who are experiencing changes in the normal health processes or who require



assistance in the maintenance of health and the prevention or management of illness, injury, or disability.

Licensed practical nurse means the practice of nursing based on less comprehensive knowledge and skill than that required of a registered professional nurse and performed under the supervision of a registered professional nurse, physician, or dentist. The practice of nursing as a licensed practical nurse is a health profession subfield of the practice of nursing [MCL 333.17208].

Registered professional nurse means an individual licensed under this article to engage in the practice of nursing in which scope of practice includes the teaching, direction, and supervision of less skilled personnel in the performance of delegated nursing activities. A supervising physician may delegate in writing to a registered professional nurse the ordering, receipt, and dispensing of complimentary starter dose drugs other than controlled substances as defined by article 7 or federal law [MCL 333.17212].

Practice of chiropractic [MCL 333.16401]

That discipline within the healing arts which deals with the nervous system and its relationship to the spinal column and its interrelationship with other body systems. Practice of chiropractic includes:

- Diagnosis, including spinal analysis, to determine the existence of spinal subluxations or misalignments that produce nerve interference, indicating the necessity for chiropractic care.
- The adjustment of spinal subluxations or misalignments and related bones and tissues for the establishment of neural integrity utilizing the inherent recuperative powers of the body for restoration and maintenance of health.
- The use of analytical instruments, nutritional advice, rehabilitative exercise and adjustment apparatus regulated by rules promulgated by the board pursuant to section 16423, and the use of x-ray machines in the examination of patients for the purpose of locating spinal subluxations or misaligned vertebrae of the human spine. The practice of chiropractic does not include the performance of incisive



surgical procedures, the performance of an invasive procedure requiring instrumentation, or the dispensing or prescribing of drugs or medicine.

Practice of optometry [MCL 333.17401]

Means one or more of the following, but does not include the performance of invasive procedures:

- The examination of the human eye to ascertain the presence of defects or abnormal conditions which may be corrected, remedied, or relieved, or the effects of which may be corrected, remedied, or relieved by the use of lenses, prisms, or other mechanical devices.
- The employment of objective or subjective physical means to determine the accommodative or refractive conditions or the range of powers of vision or muscular equilibrium of the human eye.
- The adaptation or the adjustment of the lenses or prisms or the use of some topical therapeutic pharmaceutical agents to correct, remedy, or relieve a defect or abnormal condition or to correct, remedy, or relieve the effect of a defect or abnormal condition of the human eye.
- The examination of the human eye for contact lenses and the fitting or insertion of contact lenses to the human eye.
- The employment of objective or subjective means, including diagnostic pharmaceutical agents by an optometrist who meets the requirements of section 17412, for the examination of the human eye for the purpose of ascertaining a departure from the normal, measuring of powers of vision, and adapting lenses for the aid thereof.

Invasive procedures means all of the following:

- The use of lasers other than for observation
- The use of ionizing radiation
- The use of therapeutic ultrasound
- The administration of medication by injection
- Procedures that include an incision

Practice of psychology

The rendering to individuals, groups, organizations, or the public of services involving the application of principles, methods, and procedures



of understanding, predicting, and influencing behavior for the purpose of the diagnosis, assessment related to the diagnosis, prevention, amelioration, or treatment of mental or emotional disorders, disabilities, or behavioral adjustment problems by means of psychotherapy, counseling, behavior modification, hypnosis, biofeedback techniques, psychological tests, or other verbal or behavioral means. The practice of psychology shall not include the practice of medicine, such as prescribing drugs, performing surgery, or administering electro-convulsive therapy.



**APPENDIX TWO:
COMPARISON OF ALLOPATHIC AND
OSTEOPATHIC MEDICAL SPECIALTY
CERTIFICATION BODIES**

**American Board of
Medical Specialty
Certifying Boards**

Allergy & Immunology
Anesthesiology
Colon & Rectal Surgery
Dermatology
Emergency Medicine
Family Practice
Internal Medicine
Medical Genetics
Neurological Surgery
Nuclear Medicine
Obstetrics & Gynecology
Ophthalmology
Orthopedic Surgery
Otolaryngology
Pathology
Pediatrics
Physical Medicine & Rehabilitation
Plastic Surgery
Preventive Medicine
Psychiatry & Neurology
Radiology
Surgery
Thoracic Surgery
Urology

**American Osteopathic
Association Specialty
Practice Affiliates**

Addiction Medicine
Allergy & Immunology
Anesthesiology
Dermatology
Emergency Medicine
Family Medicine
Internal Medicine
Obstetrics Gynecology
Occupational/Environmental
Medicine
Ophthalmology & Otolaryngology
Orthopedics
Pathology
Pediatrics
Psychiatry & Neuropsychiatry
Proctology
Radiology
Rehabilitation Medicine
Rheumatology
Sclerotherapy
Sports Medicine
Surgery





APPENDIX THREE:

COMPARISONS OF HEALTH PROFESSIONS

Three A: Health Professionals' Scope of Practice

**Three B: Health Professionals' Education, Training,
and Examination**

















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