

POLICY STATEMENT

Differences in Education Between Optometrists and Ophthalmologists

The American public expects and deserves the highest standards of quality care from its medical professionals. This necessitates that there be explicit standards for admission to the medical education process; standards for educational and training institutions, standards for graduation, certification, and licensure; and standards of care and performance in practice. These standards must be set, reviewed, and enforced by appropriately designated authorities. Clinical standards for medical and surgical care must be carefully derived from rigorously reviewed scientific evidence. This structure of national standards, certification, and accreditation is designed to assure the public of the safety and competency of all ophthalmologists. Ophthalmologists are medical doctors who are trained in medical school to treat the whole person and who undertake four additional years of specialized training in eye care, diseases of the eye, and surgery.

Optometrists are not medical doctors and receive an "O.D." degree; they attend optometry school for four years and are not required to undertake postgraduate training.

Some optometrists and optometric organizations are seeking full patient-care parity for optometrists with ophthalmologists, including the right to perform surgery, treat eye disease, prescribe drugs, and perform injections into the eye. This effort has been vigorously opposed by physician groups and many legislators and public-interest groups, based on the inadequacy of training and lack of public accountability and standards, compared with those that have long been in place in medicine and ophthalmology.

It is in the public's best interest to have professional authority matched by professional capability, as evidenced by equivalent training, equivalent supervised experience and equivalent evaluation and testing as performed by validated instruments. The focus should be on protecting the public. Patients are entitled to medical professionals who possess appropriate training, including extensive, directly supervised patient-care experience, and who have formally demonstrated competence with validated outcomes of care.

The American Academy of Ophthalmology (the Academy) therefore opposes any expansion of scope of practice that violates these principles.

Background:

There are significant differences in the education and training of optometrists compared with ophthalmologists. These differences are described below in detail:

ENTRANCE REQUIREMENTS

Optometry school: Optometry schools do not uniformly require a bachelor's degree for entry into optometry school.

Medical school: All medical schools require a bachelor's degree (except for combined

degree programs). Applicants are required to take the Medical College Admissions Test (MCAT), which covers subjects including college-level mathematics, biology, chemistry, biochemistry, statistics, and physics.

CURRICULUM

Optometry school: The four-year optometry curriculum includes contact lenses, optics, vision sciences, sensory processing, vision therapy, practice management, and courses related to basic medical sciences and eye diseases. The total number of hours of basic sciences course work based on an evaluation of State University of New York (SUNY) School of Optometry is estimated at 572.5 hours for a 12-week semester.⁴ The majority of the remainder of course work (1,481.5 hours) is on optometric areas of focus and also nonclinical areas (optometric theory and procedures, integrated optics, general vision therapy, contact lenses, geometrical and physical optics, , pediatric and special population optometry, behavioral vision and learning, children, vision and learning, visual function: sensory and sensorimotor, vision rehabilitation, health care economics and payment, health care management, and practice management.) There are also an estimated 635 hours laboratory and instruction on ocular disease.

Medical school: The four-year medical school curriculum focuses on fundamental principles of medicine and its underlying scientific concepts. It includes required courses on anatomy, biochemistry, genetics, physiology, microbiology and immunology, pathology, pharmacology and therapeutics, and preventive medicine, including laboratory. The total number of hours of basic sciences course work based on the average across reporting medical schools is 1,352.

Clinical sciences studies encompass all organ systems, including the important aspects of preventive, acute, chronic, continuing, rehabilitative, and end-of-life care. Clinical experience includes family and internal medicine, obstetrics, gynecology, pediatrics, psychiatry, and surgery as well as clinical electives.⁵

SYSTEMIC DISEASE TRAINING

Optometry: Optometrists receive no clinical training managing patients with different systemic diseases.

Ophthalmology: Medical students participate in two years of patient care rotations through different specialties and gain direct experience managing patients in all aspects of medicine. In addition, all ophthalmologists must complete a full year of general medical, pediatric, or surgical internship.

POSTGRADUATE TRAINING

Optometry: There is no mandatory postgraduate training in optometry. Currently, it is reported that less than 20 percent of optometry graduates go on to an optional one-year training program.⁶ There is a total of 280 training slots according to the Optometric Residency Matching Service⁷ but a total of 1,317 optometry school graduates in 2008.⁸

Ophthalmology: To become an ophthalmologist after medical school, there is a required one-year general medical, pediatric, or surgical internship and three-year

ophthalmology residency training program. About 40 percent of students go on to a one- or two-year fellowship program to concentrate training and experience in a particular subspecialty. This is an additional five to six years of training following medical school for those who complete a fellowship program. The Accreditation Council in Graduate Medical Education (ACGME) has established standards for patient care responsibilities, minimum volume of outpatient visits, and minimum volume of different surgical procedures for residents to perform during their training.⁹ In addition, ACGME standards require that ophthalmologists spend a minimum of 612 hours of laboratory time and structured instruction on ocular disease and management during residency training. This does not include the time spent during medical school.

CLINICAL EXPERIENCE

Optometry: A 1995-1996 survey of optometric curricula found that clinical experience across schools ranged from 1,215 to 2,240 hours, with an average of 1,910 hours, during the four years of optometry school.¹⁰ Another study published in 2005 reported an average of 1,768 hours of clinical experience.¹¹ There are no accreditation criteria for optometry schools with respect to the minimum requirements for the number of visits with patients who have ocular diseases or for ocular surgical operative experience.¹² Many patients who come to an optometric school clinic do not have significant ocular diseases but rather seek glasses and/or contact lenses, and therefore the optometrist's exposure to care of a broad spectrum of diseases is limited.

Ophthalmology: It is estimated that at least 17,280 of the total hours that ophthalmologists spend in medical school, internship, and residency are spent in gaining clinical experience and taking care of the patients who enter hospitals, tertiary care centers and academic medical centers. This is based on an estimate of an average of 60 hours per week (including on-call duty, the maximum duty hours for residents is 80 hours per week) multiplied by 48 weeks and by 6 years. During training, the ACGME requires that ophthalmologists manage a minimum of 3,000 outpatient visits with a broad range of disease presentation, and that they assist at and then personally perform under supervision a specified minimum number of various surgical procedures.¹³ There are also requirements for systemic disease consultation during residency training.

PROFESSIONAL REGULATION

Optometry: An American Board of Optometry was established by the American Optometric Association in October 2009 but has not yet administered its first exam.¹⁴ Another competing entity, the American Board of Clinical Optometry, was also established in 2009.¹⁵ These entities are not under the umbrella of the American Board of Medical Specialties.

Ophthalmology: There is a well-established national board certification process for ophthalmologists, as for other medical doctors. Independent of the American Academy of Ophthalmology and established in 1916, the American Board of Ophthalmology (ABO) of the American Board of Medical Specialties (ABMS) certifies ophthalmologists who have successfully completed an accredited course of education and training and who successfully pass an oral and written examination process. The ABMS is recognized as the "gold standard" in physician certification. This certification

goes beyond the minimum requirements necessary for licensure and provides the public assurance that a physician has the appropriate knowledge, skills, and experience to deliver optimum care in a specific area of medicine.¹⁶ About 91 percent of Academy members are board certified. In addition to state licensure, the ABO requires that ophthalmologists certified in 1992 or later renew their certification every 10 years; many ophthalmologists who were certified prior to 1992 voluntarily participate in this Maintenance of Certification (MOC) process.¹⁷ It requires evidence for professional standing, practice performance (review of patient records), commitment to lifelong learning and self assessment (continuing medical education and self-review tests), and cognitive expertise (proctored exam).

COMPETENCIES

Optometry: Optometry does not delineate a set of competencies that carry through training and practice of optometry in the community.

Ophthalmology: Ophthalmology residency programs require residents to obtain competencies in seven areas to the level of a new practitioner. These areas are patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, systems-based practice, and surgical competence.¹⁸ Residency programs must assess residents' performance in these competencies and use assessment results to improve their performance. The ABO certification process requires satisfactory completion of a residency training program, including evaluation of the seven competencies.¹⁹ The MOC process focuses on the seven competencies to define the skills and essential areas of ophthalmic knowledge needed to provide high-quality patient care.²⁰

CONTINUING EDUCATION

Optometry: According to the Association of Regulatory Boards in Optometry,²¹ optometric continuing education (CE) is the primary method used by optometric licensing boards to identify continuing competence of licensed optometrists. There are myriad formats by which each optometry board or licensing jurisdiction approves CE courses, disseminates course information, records course attendance, and retrieves practitioner data on course completion. There is no national organization that oversees the bodies that approve CE. The Council of Optometric Professional Education serves as a national clearinghouse for all CE courses of a statewide, regional, or national scope. It was created to remove the duplicative efforts by state boards, instructors, and program administrators.

Ophthalmology: One element of the MOC program is continuing medical education (CME). The independent Accreditation Council for Continuing Medical Education (ACCME®) is a national organization that develops standards for quality CME. ACCME accreditation is a mark of quality CME activities that are planned, implemented, and evaluated by ACCME-accredited providers in accordance with ACCME's Essential Areas and Elements and Accreditation Policies ("Accreditation Requirements"). ACCME accreditation assures the medical community and the public that such activities provide physicians with information that can help them maintain or improve their practice of medicine.²²

Evaluation:

In summary, optometrists complete four-year schools of optometry, but postgraduate

training is not required. There is a new national board certification process under development, but beyond state optometric licensure, there is no ongoing national recertification process to assure the public of the competency of optometrists who are already in practice. In contrast, ophthalmologists are medical doctors who complete four years of medical school, followed by one postgraduate year of general medical or surgical internship and three years of an ophthalmology residency training program. Nearly all undergo a national board certification process, with mandatory recertification testing if they were initially certified in 1992 or later.

The proponents of an expanded scope of optometry propose that students can learn traditional optometry sciences and management of refractive error; basic and clinical sciences, including pathology and pharmacology; and all of ocular and related disease diagnosis, management, and surgical treatment in a four-year curriculum. This four-year period includes the extended time needed for direct patient care experience under the supervision of dedicated faculty.

Scope of practice should be based on standardized, adequate training and demonstrated competence in patient care. Any expansion of optometric scope of practice not based on these principles is truly shortsighted. There is no shortcut bypassing well-proven pathways of education and training that includes medical school and residency, and years of caring for patients under the expert guidance of faculty. Ophthalmology residents see many more patients with ocular pathology, and a minimum of 3,000 patient visits is required during their training. In-depth understanding and direct experience with managing systemic diseases gives ophthalmologists the ability to diagnose ocular manifestations of systemic disease and to respond to emergencies and complications in surgery. This high level of expertise and experience allows ophthalmologists to diagnose and treat conditions in fewer visits, order tests appropriately, and manage patients in a more cost-effective manner overall.

In the interests of patient safety and quality of care, were optometric and ophthalmologic clinical privileges to be made similar, then there MUST be an equally strong legislative effort to ensure equivalence in all aspects of schooling, training, and continued competency evaluation. Otherwise, there will be two pathways that lead to the same clinical privileges and a two-tier system for patients. In one tier, the public will have medical doctors who have benefited from highly structured education and training with publicly accountable national standards. In the other tier, the patients who turn to optometrists for their eye disease treatment will be treated by providers whose skills come from a system with fewer educational requirements, less training and regulation, fewer national standards, and no independent, evidence-based system for determining competence.

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