

PREPARING for your
PROFESSIONAL CAREER

SECTION

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State of the Profession

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Optometry is a clinical discipline primarily composed of private practitioners but not necessarily solo practitioners. The overwhelming majority of optometry school students consider entering private practice immediately after graduation; however, student debt, lack of investigation, and the desire to be associated with an ophthalmology or disease related practice play some role in the eventual selection of mode of practice. To understand the opportunities available in optometry today it is necessary to examine current demographic information, particularly the number and distribution of optometrists, type of services optometrists offer; income optometrists receive, and practice patterns of optometry school graduates. The data presented in this chapter are primarily based on surveys conducted by the American Optometric Association (AOA), the Association of Schools and Colleges of Optometry (ASCO), the Association of Practice Management Educators (APME), AOA-funded surveys conducted by Silverman and Woodruff, and combined information from *Practice Academy for Eye Care Professionals* and *Key Metrics of Optometric Practice*, 2008 editions, both produced by the Management & Business Academy for Eye Care Professionals.

NUMBER AND DISTRIBUTION OF OPTOMETRISTS

The number of practicing optometrists has grown steadily during the past few decades. In 1978, there were fewer than 20,000 practitioners, but according to the Optometric Workforce Study in 2002, there were 33,825 practicing optometrists, which increased to 35,855 by 2005 and is estimated to exceed 39,000 in the next couple of years. Ophthalmology, by contrast, lists approximately 16,000 practitioners, of which nearly half are in specialty practice (glaucoma, retina) and slightly over half are in general practice.

The major demographic change during these decades has been an increase in the proportion of female optometrists. In 1973, only 3% of practicing optometrists were women, and in 1995, for the first time, the majority of Doctor of Optometry (OD) recipients were women. This is most reflected by admissions to academic institutions. In the academic year

2002-2003, the percentage of females entering colleges of optometry had reached 58.6%. The number of females entering optometry schools has continued to increase each year, and by the academic year 2007-2008, females represented 63.6% of the entering class. In the academic year 2007-2008, the percentage of woman widows and orphans received adequate care. In the 11th and 12th centuries, the enrolled in the fourth year class in the 17 schools and colleges of optometry in the United States represented 65.3% of total enrollment. For optometrists younger than age 40, 48.2% are women, compared with less than 13% of optometrists age 40 and older. The other significant changes have been in the percentage of Asian-American students enrolled in OD programs, which rose from 5.4% in 1981 to a high of 24.2% in 1999. In the academic year 2007-2008, the percentage of full-time Asian-American students enrolled in all optometry professional programs was 24.9%.

During the past four years, an average of 1,288 optometry students graduated annually and entered the practice of optometry from the 17 schools and colleges of optometry in the US. (This figure is adjusted for the number of foreign students who graduate but do not practice in the US.) With three new optometry schools implementing a new optometry program in the fall of 2009, it is estimated that the average number of optometry school graduates will increase to approximately 1,350. As of 2000, an estimated 550 optometrists retired annually and the number of projected retirees should continue to increase each year, reaching more than 800 by 2015 and steadily increasing through 2030. This recent projection may change because of the financial crisis of 2008-2009.

Based on these projections, the number of practicing optometrists should continue to grow moderately during the next few decades, and depending on the number of students graduating from the new optometric educational institutions, there may be some increase in these projections. The numbers may not increase significantly if total student enrollment remains approximately the same because some existing schools may experience a reduction in student matriculation as a result of additional programs. The economy has changed dramatically, and it remains to be seen if these changes may affect choice of profession or choice of school.

The distribution of optometrists varies across the country, with the heaviest ratio of optometrists-to-population in

the Midwest (13.8 per 100,000 population) and West (13.6 per 100,000) and the lowest ratio in the Northeast (12.9 per 100,000) and South (10.1 per 100,000). The growing popularity of the West and the Northwest during the past two decades has affected practice patterns in those areas, reflected in the growing number of employed optometrists and the trend toward partnership and group practices. The overall optometrist-to-population ratio in the US is 12.3 per 100,000. As of 2007, the majority of optometrists (38.5%) practiced in areas of 25,000 to 100,000 population, 21.7% practiced in areas with less than >25,000 population and 25.2% in areas with 100,000 to 250,000 population; the smallest percentage of optometrists (14.6%) practiced in areas with a population greater than 250,000.

MODES OF PRACTICE

The private practice of optometry has traditionally been the individual practitioner or entrepreneur who invests the capital to begin a practice and serves as its sole owner and clinician. During the 1960s, more than seven out of ten optometrists were in solo practice. During the subsequent decades, however, the preeminence of individual proprietorships waned, declining to less than half of practices by 2005. The major shift in practice patterns has been toward partnerships and group practices, which have increased in popularity from less than 10% in the 1960s to almost 40% by 2007. According to the 2008 AOA report "Caring for the Eyes of America," 31.4% of practicing optometrists were in partnerships with 2 to 4 practitioners, 3.6% were in partnerships of 5 or more practitioners.

The AOA Economic Survey of 2001 indicated that the number of self-employed optometrists in solo practice in 1964 was approximately 71%. Table 1-1 contains data that show that solo practice now only represents 31.5% of self-employed optometrists. These changes have been dramatic. The 2008 Primary Practice Survey also states that 72.7% of optometrists

that they are self-employed, down from 92.1%, as reported in the survey of 2005. These figures may also include optometrists who have lease arrangements with retail establishments or corporations and therefore consider their practices to be private solo practices.

The 2008 survey also indicates that 8.1.9% are employed by optometrists, 10.8% employed by ophthalmologists, 1.0% employed by health maintenance organizations (HMOs), 2.9% are employed by hospitals, clinics, or multidisciplinary institutions and 0.5% in educational institutions. The figures for retail optical chains are difficult to determine because independent contractors can be included in both categories (Table 1-2).

THE OPHTHALMIC MARKET

There are approximately 147 million wearers of corrective lenses (either eyeglasses and/or contact lenses) in the US, representing about 55% of the population. The 2007 AOA State of the Profession Survey estimated that the size of the ophthalmic market in 2007 was approximately \$29.25 billion. This represents a significant increase over a 16-year period. In 1989, the estimated size of the ophthalmic market was approximately \$14.5 billion; it has continued to increase in \$1- and \$2-billion increments over the past 16 years (Figure 1-1). The AOA estimates that \$7.76 billion of the \$29.25 billion ophthalmic market represents expenditures for comprehensive eyes examinations, follow-up eye care visits, and the treatment of anterior segment conditions by optometrists. The growth in the market between 2005 and 2007 is due to many factors, including the steady but moderate growth of the economy during these years and volume of services provided by optometrists, expansion in private third-party and governmental coverage of vision and eye care services, growth in the population needing eye care, and the public's enhanced awareness of the

TABLE 1-1

Surveyed OD Primary Practice Type, 2008: Self-Employed

Self-Employed	%
Practice owner (1 OD, not affiliated w/optical company)	31.5
Practice owner (2-4 ODs, not affiliated w/optical company)	26.2
Practice owner, (5+ ODs, not affiliated w/optical company)	2.4
Franchisee, (1 OD, affiliated w/optical company)	0.7
Franchisee, (multi. ODs, affiliated w/optical company)	0.8
Lessee (1 doctor, affiliated w/optical company)	3.4
Lessee (multi. ODs, affiliated w/optical company)	1.4
Independent contractor	4.5
Other self-employed	1.8
Total	72.7

From Edlow RC, Marcus GR: AOA Scope of practice survey. *Optometry* 79(6):337-343, 2008. OD, Doctor of Optometry. report

TABLE 1-2

Survey OD Primary Practice Type, 2008: Employed by Others

Self-Employed	%
ODs (not affiliated w/optical company)	8.1
ODs (affiliated w/optical company)	2.7
Ophthalmologist (s)	7.3
HMO	1.0
Hospital/clinic/other multidisciplinary setting	2.9
Armed forces/VA/USPHS	2.5
Educational institutions	0.5
Local/state/federal government	0.3
Optical/ophthalmic manufacturer/wholesaler	0.2
Non-optometry-owned independent franchise/optical	0.3
Other, retired, unemployed	0.9
Total	27.5

From Edlow RC, Marcus GR: AOA Scope of practice survey. *Optometry* 79(6):337-343, 2008
OD, Doctor of Optometry; HMO, Health Maintenance Organization; VA, Veterans Affairs; USPHS, United States Public Health Service.

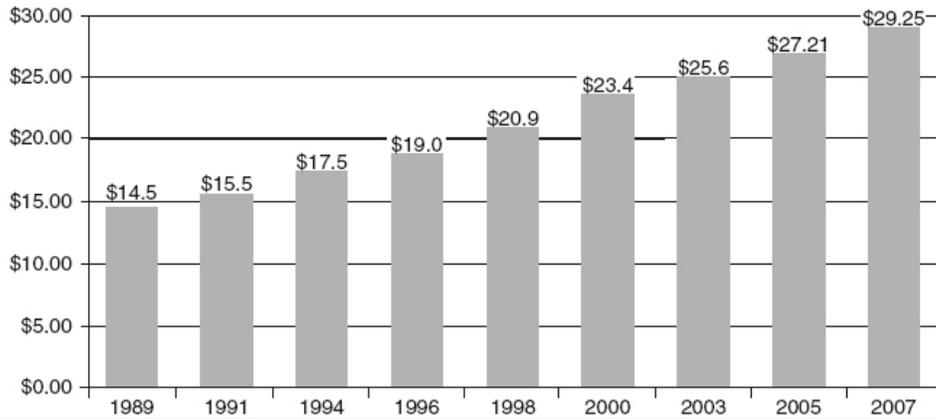
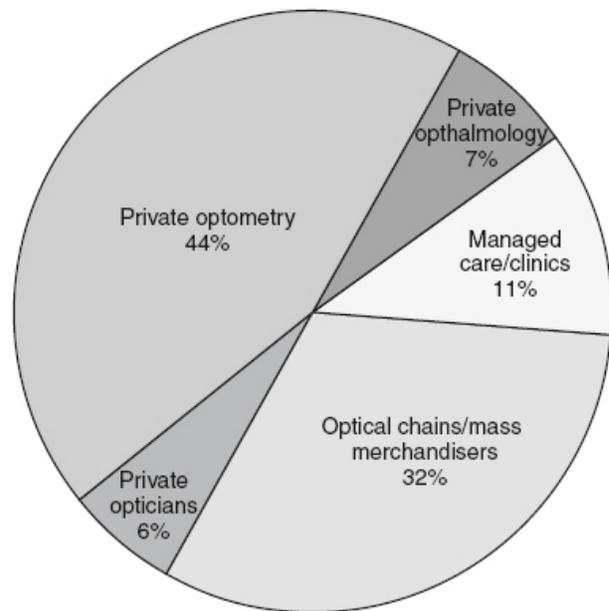


FIGURE 1-1 Estimated size of ophthalmic market. (From Edlow RC, Marcus GR: State of the profession. *Optometry* 79(6):337-343, 2008.)

importance of good eye health care. It is not known if these trends will continue with fluctuations in economic markets, nationally and globally. The major share of this ophthalmic market has been by optometrists in private practice, who in 2007 earned 44.37% of market income (Figure 1-2).

It is estimated that 88 million primary eye care examinations were performed in the US and optometrists conducted approximately 70% of them. Because of the effects of presbyopia on the “baby boom” generation, it is anticipated that most growth in eye care will involve persons in the 45 years old and older bracket. Corrective lens wear will inevitably be affected by the aging of this generation; currently, 42.7% of lenses sold by optometrists are single vision, 23.0% are bifocals and trifocals, and 34.3% are progressive lenses. Progressive lenses are the fastest growing part of the market (Table 1-3).

As of 2000, there were about 34 million contact lens wearers in the US, which is an increase of 8% in soft lens wear from the previous year. The contact lens market had not been expected to expand significantly in the next few years, primarily because of the impact of refractive surgery. The 2002-2006 period demonstrated that the contact lens retail market growth averaged 10% annually, more than twice the rate of growth of the overall optical market, which was flat. Over 95% of retail sales of contact lenses are soft lenses. Gas permeable lenses continue to slowly lose market share. Over the past 20 years, disposable soft lenses replaced every 2 to 4 weeks have come to dominate the market, accounting for nearly 85% of retail sales



Private optometry	44.37%
Private ophthalmology	7.36%
Managed care/clinics	11.15%
Optical chains/mass merchandisers	31.55%
Private opticians	5.57%

FIGURE 1-2 Ophthalmic market shares, 2007. (From Edlow RC, Marcus GR: State of the profession. *Optometry* 79(6):337-343, 2008.)

TABLE 1-3						
Spectacle Lenses Dispensed by Type, Mean Percentage, 1994-2006						
Lens Type	1994(%)	1998(%)	2000(%)	2002 (%)	2004(%)	2006 (%)
Single vision	43.7	43.0	44.2	41.6	40.9	42.7
Bifocal (nonprogressive)	30.3	24.3	20.2	20.0	19.6	17.6
Trifocal (progressive)	6.6	6.1	6.1	6.1	5.7	5.4
Progressive	19.4	26.6	29.5	32.3	33.8	34.3
All lens types	100	100	100	100	100	100

From Edlow RC, Marcus GR: 2007 AOA Optical Dispensing Survey. *Optometry* 78(10):550-553, 2007.

currently. In addition, over the past 5 years, silicone hydrogel lenses have become the dominant lenses and are projected to surpass all traditional soft lens materials in the US by 2012.

Laser vision correction (each eye considered as a separate procedure) in the US in 2000 was estimated to be 1.55 million, up from 1999 projected figures of 980,000, and in 2000, approximately a \$2.5 billion industry. Interestingly, in a 6 month refractive surgery survey that was conducted in 2008, optometrists reported that 10.1% of their patients showed an interest in refractive surgery, 37.5% reported a decline in interest, and 52.4% reported that patient interest in refractive surgery remained unchanged. Twenty-three percent of the US population with vision correction wears contact lenses. Contact lens examinations comprise about 52% of all comprehensive eye examinations administered each year by private optometrists and 35% of those by corporate-affiliated ODs. Contact lens product sales account for 16% of gross revenue in the average private practice.

NUMBER OF ANNUAL EYE EXAMINATIONS

The number of complete eye examinations performed annually by optometrists has grown steadily since the mid-1980s, when parity legislation passed by the US Congress gave optometrists the same standing as physicians under Medicare. This amendment of the Medicare legislation allowed optometrists to receive reimbursement for medical eye services performed for Medicare-eligible patients. Before the amendment, only ophthalmologists were eligible to provide these services under Medicare provisions.

According to the AOA surveys, as of 1990, the mean volume of eye examinations per year per optometrist was 1,867. In 1999, the mean number of eye examinations per year per optometrist was 2,335, and by 2004 it had dropped to 2,134. In 2006, they had increased to 2,229. An explanation for the increase could be that the average number of complete eye examinations per hour worked (1.18) was slightly more in 2006 than in 2004.

Optometrists, however, had been working fewer hours; the number of hours worked in 1999 was 1,941, and by 2004, the number of hours had dropped to 1,867. The number of hours per OD increased slightly in 2006 to 1,894 per year. The mean (average) number of all "other exams" per year dropped from 1,073 in 2001 to 855 in 2006 (Table 1-4). It is expected to rise as the number of services performed by optometrists expands because of changes in the scope of practice and acquired expertise by all optometrists.

SERVICES OFFERED BY OPTOMETRISTS

With respect to services offered by optometrists, 2006 figures indicate that contact lens services are the most common and are provided by 96.9% of practicing optometrists. These figures show that 91.2% of optometrists provide dispensing services (spectacles). It is estimated 36.2% of optometrists offer some low vision services and 25.4% vision therapy. It is also estimated that 88.1% of optometrists prescribe pharmaceutical agents for therapeutic purposes.

AOA surveys also reported that as of 2006, 52.8% of optometrists incorporated within their practice lens tinting, 48.3% some lens edging, 36.9% provided coatings for ultraviolet protection, and 17.1% also provided coating for scratch resistance of ophthalmic lenses. Approximately 5.7% and 5.5% incorporated lens surfacing and lens casting, respectively. These figures indicate that widespread use of in-office finishing laboratories is a development that has been quite consistent, and this development represents a response to consumer demand for speedier delivery of eyewear products (Table 1-5).

INCOME

The 2007 AOA Economic Survey (which reported income for the year 2006) indicated that the individual mean net income for all optometrists was \$131,197. This figure is an increase from the 1996 survey that was published in the first edition of this text,

TABLE 1-5	
ODs Who Perform In-Office Optical Lens Finishing by Procedure, Mean Percentage, 2006	
Procedure	Yes(%)
Lens tinting	52.8
Lens edging	48.3
Coating for ultraviolet	36.9
Coating for scratch-resistance	17.1
Lens surfacing	5.7
Lens casting	5.5

From Edlow RC, Marcus GR: 2007 AOA Optical Dispensing Survey. *Optometry* 78(10):550-553, 2007.
OD, Doctor of Optometry.

TABLE 1-4						
Mean Volume of Other Examinations, 1996-2006						
	1996	1999	2001	2003	2004	2006
Other exams/year	896	994	1073	963	916	855
Other exams/week	18.1	20.1	21.9	19.6	18.7	17.4
Other exams/hour	0.45	0.51	0.57	0.51	0.47	0.45

From Edlow RC, Marcus GR: State of the profession. *Optometry* 79(6):337-343, 2008.

in which the figure was \$92,637. The figures for the year 2000 indicated that the mean (average) total individual net income was \$138,846, and for some unexplained reasons it dropped to \$130,273 in 2002; but it did recover to \$136,898 in 2004. Again, there was a drop in individual net income in 2006 to \$131,197. As previously stated, working hours for optometrists had decreased but again increased slightly in 2006 (Table 1-6). In addition, during the later part of the decade, mean net income increased by more than 41%. For self-employed practitioners, the mean gross income in 2006 was \$530,914, compared with a 1996 figure of \$348,134. This figure represented an increase of a little over 52% during a 10-year period (Table 1-7).

The 2007 survey also found that the total individual net income of female optometrists was about 28.6% less than that of male optometrists (\$119,000 for men and \$85,000 for women). The difference has consistently lessened throughout the years: in 1992, female ODs earned 31% less than male ODs; in 1994, 29% less; in 1996, 27% less; in 1998, 24% less; and in 2000, 25% less. In 2004, the difference was 22% less, but it went up to 28.6% in the latest survey. This could be attributed to more practicing female optometrists taking time off or working part-time to devote time to the needs of family.

Two reasons have been offered for this disparity in gender differences related to income; first and perhaps the most important is the length of time that male and female optometrists who responded to the economic surveys have been in practice. The median number of years in practice for male respondents at the end of 2006 was 20 years and for female respondents, the median number was only 8 years. Data from economic surveys show that

mean and median incomes generally rise for ODs with more years of professional practice. The second factor affecting the gender gap is that female ODs are more likely than their male counterparts to be employed by others, and as noted, employed ODs generally earn less than self-employed optometrists.

AOA economic surveys have consistently shown that optometrists in partnerships or groups earn more gross and net income than individual practitioners, and the 2008 survey confirms that trend is continuing. The mean net income in the year 2006 ranged from \$134,094 for solo practitioners to \$179,205 for a practice composed of three to five partners.

For employed optometrists, the mean net income for the year 2006 ranged from a high of \$115,250 for employment by an ophthalmologist to a low of \$102,981 for employment by an optometrist. Interestingly, the AOA survey also indicated that optometrists associated with the Armed Forces, the US Department of Veterans Affairs (VA), and the US Public Health Service (USPHS) were in the middle range compared with all other modes of practice (Table 1-8).

For optometrists beginning solo practice, 6 to 10 years are generally required before net income begins to reach the national mean. This length of time is usually needed to build a patient base and pay off educational debts and the costs of initiating a practice. Peak years for income are approximately 16 to 30 years in practice, after which time the average individual practitioner begins to reduce the time spent at work (Table 1-9). From 30 to 40 years, earnings decrease somewhat, but it is apparent that optometrists may expect to enjoy a lengthy professional career, if they choose to do so.

Mean Total Individual Net Income					
Year	Current Median Income	1996 Income, CPI Adjusted	Difference in Current Dollars	Income in 1996 Dollars	Difference in 1996 Dollars
1996	\$92,637	\$92,637	\$0	\$92,637	\$0
1998	\$108,262	\$96,239	\$12,023	\$104,210	\$11,573
2000	\$138,846	\$101,670	\$37,176	\$126,510	\$33,873
2002	\$130,273	\$106,217	\$24,056	\$113,618	\$20,981
2004	\$136,898	\$111,471	\$25,427	\$113,767	\$21,130
2006	\$131,197	\$119,029	\$12,168	\$102,107	\$9,470

From Edlow RC, Marcus GR: 2007 AOA Optical Dispensing Survey. *Optometry* 78(10):550-553, 2007.

Self-Employed Mean Gross Income, 1996-2006						
	1994(%)	1998(%)	2000(%)	2002 (%)	2004(%)	2006 (%)
Practice	\$494,117	\$523,645	\$648,923	\$630,890	\$630,654	\$742,020
OD	\$348,134	\$364,942	\$415,623	\$523,608	\$429,956	\$530,914

From Edlow RC, Marcus GR: National highlights: 2007 AOA Economic Survey. *Optometry* 78(12):674-677, 2007. OD, Doctor of Optometry.

TABLE 1-8

Total Individual Net Income by Practice Type, 2006

	Mean Net Income	Median Net Income
SELF-EMPLOYED		
Solo	\$134,094	\$115,000
Partnership or group(2 person)	\$176,944	\$149,000
Partnership or group(3-5 person)	\$179,205	\$141,000
Partnership or group (6 or more)	\$159,300	\$92,500
Optical chain franchise or lease	\$100,704	\$90,000
Independent contract	\$94,520	\$94,000
Other self-employed	\$128,400	\$64,000
EMPLOYED BY		
Optometrist(s)	\$102,981	\$85,000
Ophthalmologist(s)	\$115,250	\$100,500
HMO	\$107,125	\$104,000
Hospital/clinic/other multidiscipline setting	\$101,867	\$98,000
Optical chain	\$91,400	\$91,000
Armed forces/VA/USPHS	\$101,579	\$84,000
Other employed	\$106,000	\$95,000

From Edlow RC, Marcus GR: National highlights: 2007 AOA Economic Survey, *Optometry* 78(12):674-677, 2007.
HMO, Health Maintenance Organization; VA, Veterans Affairs; USPHS, United States Public Health Service.

TABLE 1-9

Total Individual Net Income by Years in Practice, 2006

Years in Practice	Mean Net Income	Median Net Income
5 or less	\$99,187	\$87,000
6 to 10	\$104,866	\$98,000
11 to 15	\$135,900	\$110,000
16 to 20	\$171,644	\$141,000
21 to 25	\$145,603	\$127,000
26 to 30	\$177,179	\$140,500
31 to 35	\$132,235	\$111,000
36 to 40	\$94,714	\$97,000
41 or more	\$104,250	\$110,000

From Edlow RC, Marcus GR: National highlights: 2007 AOA Economic Survey, *Optometry* 78(12):674-677, 2007.

EXPENSES OF PRACTICE

The expenses of self-employed optometrists in private practice may be divided into the following categories: laboratory costs; wages, benefits, and commissions for employees; rent or mortgage expense; and other costs of doing business.

A practice's net income is the amount remaining after these expenses have been paid. The percentage of gross income devoted to laboratory expenses has changed relatively little during the past few years. In 1996, these expenses constituted 28.0% of gross income, whereas subsequent surveys reported that laboratory costs ranged from 27.2% in 2004 to a low of 24.4% in 2006. The wages, benefits, and commissions paid to employees have ranged from a low of 15.3% to a high of 18.3%. The cost of rent or mortgage payments, including utilities and telephone services, has been rising. This cost represented 6.7% of gross income in 1996 and has increased consistently to 11.0% as of 2006 (Table 1-10). The most important statistic, the ratio of net-to-gross income, has consistently ranged from approximately 30% to 33%.

In 1994, the AOA survey's gross earnings figures for optometrists indicated that income was derived from the following three principal sources: examination fees, the sale of spectacles, and the fitting and sale of contact lenses. The approximate breakdown of these sources of income indicated that examination, diagnosis, and treatment of patients produced 45% of income; the sale of ophthalmic lenses and frames generated 35% of income; and the fitting and sale of contact lenses provided 20% of income. In 1998, statistics from "Jobson's Eye Care Independent 1998 Survey" reported significant differences in the breakdown of services and materials. This survey divided income into the following four sources of revenue: examination fees, including fees for therapeutic care, 29%; spectacles, 36%; contact lenses, 23%, and prescription and Plano sun wear and accessories, 12%. These figures indicated that 71% of income in private practice was derived from the dispensing of some type of ophthalmic materials. Both of these surveys illustrate the significance of ophthalmic dispensing and contact lens services, which continue to provide the majority of income in private practices. These percentages could change in the future since according to the AOA Information & Data Committee's 2008 Scope of Practice Survey, "Optometrists have long been very active in the providing of medical eye care to their patients, but the survey results confirm they have now become even more important as providers of medical eye care in their communities." Reimbursement from patients' medical

TABLE 1-10

Median Percentage of OD Gross Practice Income Selected Expenses Categories 1996-2006*

Expense	1996(%)	1998(%)	2000(%)	2002 (%)	2004(%)	2006 (%)
Laboratory	28.0	26.8	28.0%	27.7%	27.2%	24.4%
Non-OD wages	15.3	15.3	16.4%	17.3%	18.1%	18.3%
Rent	6.7	6.8	6.3%	6.5%	6.7%	11.0%

From Edlow RC, Marcus GR: National highlights: 2007 AOA Economic Survey, *Optometry* 78(12):674-677, 2007. OD, Doctor of Optometry.

insurance plans could significantly add to an optometrist's income, especially if third-party insurance plans reduce payment for eyewear and refractive services.

An important factor affecting examination income is the influence of third-party reimbursement plans (e.g., Medicare, Medicaid) and nongovernmental vision medical eye care plans (e.g., vision or medical insurance plans, Vision Service Plan [VSP], etc). Although the influence of these plans varies from community to community, the 2008 AOA survey indicated that 50.5% of a typical optometrist's patients are covered by private plans, 29.1% are covered by public programs (such as Medicare or Medicaid), and 20.4% have no third-party coverage for optometric services (Table 1-11). According to the 2008 survey, revenue from private plans represented 43.3% of total practice income, whereas 24.5% was from public plans and 32.2% was from out-of-pocket payments (including costsharing amounts from patients covered by third parties).

PRACTICE PATTERNS OF BEGINNING PRACTITIONERS

Optometry school graduates may choose any of several paths when they enter the profession: they may go directly into private practice as self-employed practitioners; they may seek an employment position with other practitioners, in institutions, with government or industry, or by a practitioner associated with a corporate practice; or they may decide to continue their education by selecting a residency position. The reason for making a particular career choice obviously varies from person to person, but according to surveys conducted by APME, most optometry school graduates seek to become private practitioners in a partnership setting in medium-sized communities and most of them believe it will require 5 or more

years to realize this opportunity. This finding indicates that many optometry school graduates do not enter the practice opportunity they would prefer immediately after graduation.

In 2005, Silverman, Woodruff, and Rumsey completed an AOA funded survey of graduates from the 17 schools and colleges of optometry during the prior 5 years. This study, titled "A Survey of Recent Optometry Graduates," indicated that the initial practice modes for graduates were retail (34.3%); employed by OD (23.8%) or physician (10.8%); group/partnership (8.7%); solo practice/self-employed (6.5%); residency (5.7%); federal service (4.5%); education (2.0%); hospital or clinic (1.8%); HMO (0.9%); and optical/ophthalmic industry (0.9%).

Self-Employment

Although most graduates aspire to become self-employed, only about 8.7% do so immediately after graduation. Among the most significant factors influencing the decision to become self-employed are age, previous business experience, amount of educational debt incurred, and family obligations. Male graduates are more likely to enter directly into self-employment than female graduates. The individual who intends to enter into self-employment immediately must devote time to planning and preparation while in school and must have financial resources necessary to begin practice or be able to secure the credit necessary for such an undertaking. In this arena of changed financial circumstances throughout our country, more intense investigation and determination may be needed to secure the financing for either buying an existing practice or starting a practice. Various optometric knowledgeable loan companies are available. In an article published in 2004 based on an earlier AOA-funded survey, Silverman, Woodruff, and Hardigan were able to establish that the great majority of students that were about to graduate would prefer private practice, if they were not in debt or could match with existing practice opportunities.

Employment

Approximately 77.2% of optometry school graduates enter the practice of optometry through employment positions. Because of the greater availability of positions in commercial settings and the relative ease (as compared with professional positions) with which they may be found, this type of employment is commonly chosen by optometry school graduates. The 2005 survey by Silverman, Woodruff, and Rumsey indicated that 34.3% of optometric graduates choose retail; however, 34.6% choose employment by an OD or MD. Ophthalmology positions offer the best economic benefits. In the past, there have been relatively few of them available to new graduates, but this opportunity has been increasing. Employment with an optometrist may be preferred because such employment is often the means whereby a graduate eventually joins the practice as a co-owner. Finding such an opportunity, however, can require a significant investment of time. It also may be timeconsuming to locate available positions in multidisciplinary

Source	Patients(%)	Revenue(%)
VSP	22.0	18.0
Other self-directed vision plans	9.7	8.8
HMOs (private sector)	6.4	5.2
Other managed care	8.4	7.8
Other private indemnity/discount plans	4.4	3.5
Medicare HMOs	13.3	12.2
Medicare fee-for-service	8.8	6.6
Medicaid	2.6	2.2
Other government plans	—	—
No third-party coverage	20.4	—
Patient out-of-pocket payments	—	32.2
Total	100	100

From AOA: 2008 Third Party/Managed Care Survey National Highlights
HMOs, Health Maintenance Organization; VSP, Vision Service Plan

clinics, HMOs, or industry. Optometry students who do not begin efforts early to locate and make themselves familiar to a prospective employer are in general not as successful in obtaining these positions as students who take these steps. Location is still the main consideration for new graduates. Investigation into where a prospective graduate would find their best match takes time and diligence. These investigations should begin well before graduation. Time is important and should be divided between the crucial aspects of clinical and didactic studies, as well as the realization that time goes quickly and the future is now!

Residencies

According to a study by ASCO, about one-third of optometry students express an interest in residency training. As of 2005-2006, there were 179 optometry graduates participating in the more than 150 residency programs. Approximately 14% of optometry school graduates choose to participate in them. Female graduates are more likely than male graduates to select residency training.

Residency training better prepares optometrists for private practice—particularly in specialty areas—and may be a requirement for a career in education and may also be required for association with the VA or other government service. A residency should not be considered to just delay deciding where or how to practice. Competition for residencies can be highly rigorous and planning for acceptance into the residency of choice should be considered early on in the student's clinical training.

Selection of Practice Opportunity

According to APME surveys, about one-third of optometry school graduates do not select a practice opportunity until after graduation from optometry school. These surveys indicate that more female graduates wait until after graduation to choose a practice opportunity than male graduates. Women are more likely to enter into employment positions and also are more willing to work in two or more modes of practice than men. Since many optometry students are married, decisions on how and where to practice are dictated possibly by consideration of the spouse.

Location of Practice Opportunity

APME surveys have indicated that the majority of optometry school graduates seek to work in areas with <100,000 population. Approximately two-thirds of optometrists currently practice in areas of this size.

First-Year Income

The 2005 AOA-funded survey, "A Survey of Recent Optometry School Graduates," covered graduates from 2000-2004. It was determined that in the class of 2000, over a third (34.6%) made \$60,000 or less in their initial optometric position, whereas

5 years later, only 15.3% were making \$60,000 or less per year. For the same class, only 6.4% were making over \$100,000 in their initial position, and nearly a third (28.5%) were making over \$100,000 at the time of the survey. The lowest income was earned by residents, and the highest by employees of hospitals, clinics, multidiscipline practices, and ophthalmologists.

The 2007 AOA Economic Survey indicated that optometrists in practice 5 or fewer years had a mean net income of \$99,187, and from 6 to 10 years, the income was reported at \$104,866. Many graduates look at the mean net income of all optometrists and assume that should be their first-year income. There is a need to investigate more thoroughly and review all avenues of income, including benefits and other perks that add to the basic income.

Indebtedness at Graduation

Statistics compiled by ASCO for the academic year 2007-2008 indicate that 91% of students enrolled in colleges of optometry received financial aid, usually in the form of student loans. The statistics also indicated that an average 11% were covered under state contracts (states without optometry schools). The average indebtedness for all students in the 2007-2008 academic year varied from school to school and ranged from \$14,100 to 152,500; the median debt was \$92,755. Graduates of private schools tend to have higher levels of indebtedness than graduates of state-supported schools. The effect of debt on practice choices has become a concern of AOA and ASCO, which has led them to sponsor educational programs for optometry school students to assist them in making good choices in limiting debt.

Identifying Practice Opportunities

The process of identifying a practice opportunity should begin in optometry school, with a planned, systematic effort to determine the personal and professional needs of the individual student (see Chapter 2). This process should come to fruition at graduation, permitting a smooth transition from student to practitioner. To realize such an ambitious goal, however, a new licensee must make the following key decisions:

- Where to practice
- Whether to begin as an employer or employee
- How to satisfy the debts of education while starting or buying a practice
- Determine goals (including career, family, financial, physical, mental, social, and spiritual goals)

Individual decisions should be based on personal preferences and an understanding of the relevant facts. Research is usually necessary to obtain information on a location or community. The status of the state law defining the practice of optometry also is an important consideration. Students must be aware of the constraints of a particular state that would restrict them from practicing to their full scope of training. Investigation of the community and its economic standing is important in considering the capacity of a community to absorb another practitioner or to support an optometrist. Visits to the community and to individual practitioners are

often crucial. Selecting an extern site in the area of possible consideration of practice should be considered, if applicable to the particular selection process at the student's institution.

The decision to practice initially as an employee is usually based on economic necessity or recognition of the need for experience before initiating an individual practice. Graduates should consider carefully the advantages and disadvantages of employee arrangements; if employment is determined to be the best option, a systematic effort to locate a practice opportunity should be started while the student is in optometry school. For graduates who desire immediate self-employment, meticulous planning, the use of competent advisors, and careful financial decision-making are obligatory.

Indebtedness should not be permitted to adversely influence goals and career plans. Maintaining educational debt at a minimum is a prerequisite for all graduates (see Chapter 6). Indebtedness influences earning capacity and the ability to secure loans needed to purchase equipment for the start of a practice, to buy a house and automobile, or to respond to unexpected financial emergencies.

Planning should be initiated in school so that personal and professional goals can be attained more easily after graduation. A wealth of reference materials is available to students or recent graduates, and these materials should be consulted. The AOA has a practice placement service and provides technical information to optometry students and association members. In addition, many schools and colleges of optometry have websites for opportunities, as well as other independent sites. Optometry school alumni associations also may be used as a resource. The most important resource, however, is the initiative of individual students. Visiting practices, going to national, state and local association meetings, assessing communities, and compiling information about practice options are essential tasks that should be performed during optometry school.

The prepared graduate is more likely to find an opportunity and to take advantage of it. This alone is reason to devote the necessary effort to the task.

CONCLUSION

In the chapters that follow, the process of beginning a practice, organizing it, and operating it efficiently are described. It should always be kept in mind, however, that individual initiative is the primary consideration for any practice and that success more often depends on initiative than any other factor. Our patient population base is changing. Even though the number of new ODs entering the workforce each year is expected to increase through 2015 and beyond, the need for care by patients is also increasing. The number of presbyopes and the older population with increased eye care needs (diabetes, hypertension, glaucoma) is growing, and the need for early childhood exams will all place more demands on the optometric workforce. In addition, we have a diverse cultural population that is increasing each year in the US. Consideration

of locations for successful practice should include the demographics of minority groups.

Data from AOA surveys suggest that women optometrists are underrepresented among the respondent population, and therefore the importance of female optometrists in the current workforce is understated. Only 27% of female optometrists responded to the recent technology survey. More than half of optometry graduates are female, and this number is projected to continue or increase. We need to encourage all female optometrists to respond and give definite input to AOA surveys and current statistics. This response would validate the positive influence of female optometrists and different future dynamics of the optometric profession.

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