How Do Average Michigan OD's Spend Their Time: Specific Aspects of Patient Care In Optometry

by

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Introduction

What exactly does the average OD spend his or her time doing during the day, and should some specific aspects of patient care really be considered a "specialty"? Does "specialization" in optometry even exist? Or should it? If specialized optometry shall exist, then what kind of training should be required for an optometrist to be considered a "specialist" in a certain aspect of patient care?

Although specialty groups do currently exist, the Low Vision Section (LVS) of the American Optometric Association (AOA) and the Council on Visual Development (COVD)[1] for example, there are no real requirements established for optometrists who claim to be "specialists" in certain areas of patient care (eg. contact lenses, pediatrics, low vision, or vision therapy).

Post-graduate and post-residency fellowship training allows ophthalmologists to be commonly regarded as "specialists" in certain areas of ophthalmological practice (eg. corneal specialist, retinal specialist, glaucoma specialist etc.).[2,3] Although residencies are gaining popularity among OD's, they are still an optional part of the practice of optometry. In similarity with ophthalmology, should optometry require certification of specialties by residency, fellowship, or other post-graduate training? [4,5,6,7,8] And if so, what changes need to be made in the already challenged arena of optometric education? [9,10,11]

The purpose of this study is simply to find out what average Michigan OD's spend their time doing. Specifically, what aspects of patient care do OD's commonly perform in their everyday practices, and what percentages of overall office time does the average OD spend on each specific aspect of patient care.

Methods

Names and addresses of both Michigan Optometric Association (MOA) members and non-members were obtained from the state association and used to determine the total number of OD's in Michigan to be 1229. In order to minimize cost of postage, twenty percent of all OD's was chosen as an adequate sample size for this study. A randomized sample was taken by drawing OD name and address out of a hat for MOA members and non-members from each of the eight optometric districts in Michigan. (See Figure 1) Therefore, as to not discriminate by state association membership or by district, both members and non-members in each of the eight districts were sent surveys in equal proportions. Different colored paper surveys were used to designate each district so that surveys could be distinguished by district upon return. Therefore, the responses for each district could be kept separate for analysis.

The surveys were mailed (see Figure 2) and the respondents were given approximately three weeks to return the completed form in an included self-addressed business reply envelope. Since the surveys were to be anonymous, the name and address of the OD was printed only on the outside mailing envelope. A total of 246 anonymous surveys were sent to randomly selected Michigan OD's in each of the eight optometric districts in the state.

Table 1: Total Number of Surveys Sent by District and MOA Membership

District/Color	MOA Members	MOA Non-Members	Member Surveys Sent	Non-Member Surveys Sent	Total Surveys Sent
1-white	244	207	49	41	90
2-pink	121	59	24	12	36
3-blue	40	12	8	2	10
4-yellow	109	67	22	13	35
5-grey	24	10	5	2	7
6-purple	40	10	8	2	10
7-green	145	63	29	13	42
8-tan	53	25	11	5	16
Totals	**776**	**453**	**156**	**90**	**246**

Figure 1: Optometric Districts in Michigan

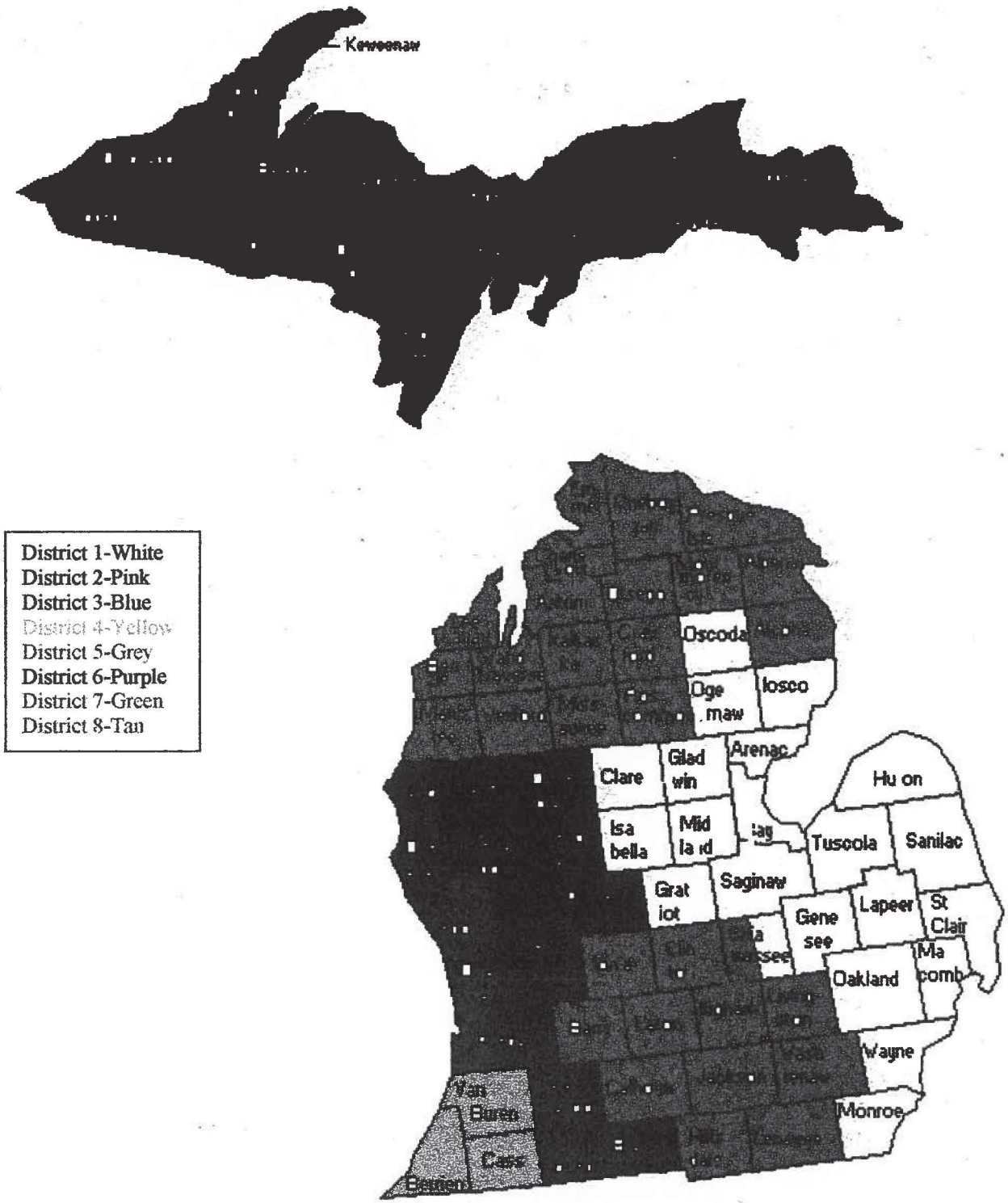


Figure 2: Optometric Survey

Dear Dr.,

You have been randomly selected to participate in this anonymous survey as part of my senior project for the Michigan College of Optometry. The purpose of my senior project is to survey OD's in Michigan to find out what specific types of patient care are available in practices throughout the state. Please fill out the following survey and return it in the enclosed envelope **by November 1, 2002.** If you are currently a non-practicing OD, please do not return the survey. Thank you for your participation, it is greatly appreciated.

Sincerely,
Jacqueline Scarbrough
Fourth Year Student, MCO

County/counties in which you currently practice: _____

Approximate number of hours worked per week: _____

Approximate amount of time spent with each patient in the exam room: _____

Does your office currently have computerized patient records? (please circle) **Yes / No**

Type of practice/setting: (please circle) **Private** **OD/MD** **Commercial/Chain** **Other**_____

Please circle approximately what percentage of your time is spent on each of the following:

Primary Care
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Soft Contact Lenses (including toric, bifocal, monovision, and tinted)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

RGP Contact Lenses
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Other Specialty Contact Lenses (keratoconus, piggyback, prosthetic etc.)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Pediatrics
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Visual Information Processing Assessments (VIPA's)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Vision Therapy
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Ocular Disease Management
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Pre/Post-Surgical Co-Management
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Special Needs/Disabled/Nursing Home Populations (may include time spent out of office)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Basic Low Vision (Simple Handheld Magnifiers/Telescopes)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Advanced Low Vision (Other Magnifiers, Telescopes, Electro-Optical Devices, CCTV's etc.)
0 <10% 11-30% 31-49% 50-75% 76-90% >90%

Other (please specify area of practice and time spent)_____

Results

A total of 96 out of the 246 surveys (39%) were returned within the required time period. Responses were sorted by district according to paper color, and the results were tabulated using statistical methods. The percentages of surveys returned by district and overall can be seen in below in Table 2.

Table 2: Returned Surveys

District	# Surveys Sent	# Surveys Returned	% Surveys Returned
1	90	31	34.4%
2	36	17	47.2%
3	10	1	10.0%
4	35	16	45.7%
5	7	3	42.9%
6	10	4	40%
7	42	16	38.1%
8	16	8	50.0%
Overall	**246**	**96**	**39.0%**

The following definitions and formulas[12] were used to calculate the statistical values for the data that was collected from the surveys.

Sample size (n) = the number of surveys returned in each district or overall

Mean (X) = $\sum X_i / n$ where X_i = the sample values

Median (M) = $X_{(n+1)} / 2$ Note: In cases where there was an even numbered sample size, the average value for the middle two sample values was taken.

Mode = the most commonly given sample value

Note: In cases where there were no repetitions of values no mode was given (N/A). Also, if two sample values were

repeated an equal number of times, the average of the two values was taken.

Range = the high and low values of the sample

Standard Deviation (SD) = $\sqrt{\left(\left(\sum X_i^2 - (\sum X_i)^2/n\right)/(n-1)\right)}$

The sample size, mean, median, mode, range, and standard deviation for each district and overall are shown in Tables 3 and 4 for the number of hours worked per week and the amount of time spent with patient in exam room respectively.

Table 3: Hours Worked Per Week

District	Sample size (n)	Mean (X)	Median (M)	Mode	Range	Standard Deviation (SD)
1	31	40.3	40	40	20-57.5	+/- 8.9
2	17	36.8	38	50	16-50	+/- 10.5
3	1	35.0	35	35	35	0
4	16	38.4	40	40	10-45	+/- 8.4
5	3	36.7	38	N/A	32-40	+/- 4.2
6	4	35.8	36	N/A	30-41	+/- 5.6
7	16	38.7	40	40	30-45	+/- 4.3
8	8	35.0	38.5	40	8-48	+/- 11.9
Overall	**96**	**38.4**	**40**	**40**	**8-57.5**	**+/- 8.6**

Table 4: Time Spent With Patient In Exam Room

District	Sample size (n)	Mean (X)	Median (M)	Mode	Range	Standard Deviation (SD)
1	31	24.7	25	20	10-60	+/- 9.6
2	17	28.5	25	20	20-57.5	+/- 10.5
3	1	30.0	30	30	30	0
4	16	25.9	20	20	17.5-45	+/- 9.0
5	3	24.2	20	20	20-32.5	+/- 7.2
6	4	24.4	23.75	N/A	20-30	+/- 4.3
7	16	25.9	21.25	20	15-45	+/- 9.2
8	8	21.9	21.25	20	12.5-30	+/- 5.1
Overall	**96**	**25.6**	**22.5**	**20**	**10-60**	+/- 9.0

Below, Figure 3 shows the breakdown of practice type/settings of OD's overall in Michigan. In each specific district, the breakdown of practice type/settings can be seen in Figure 4.

Figure 3: Types of Practice/Settings

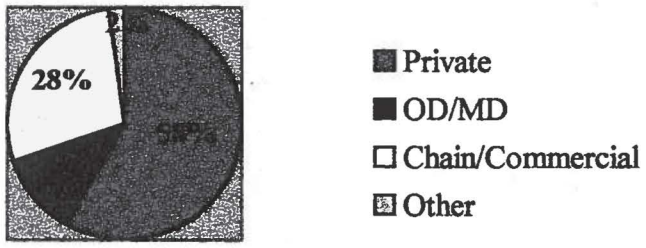
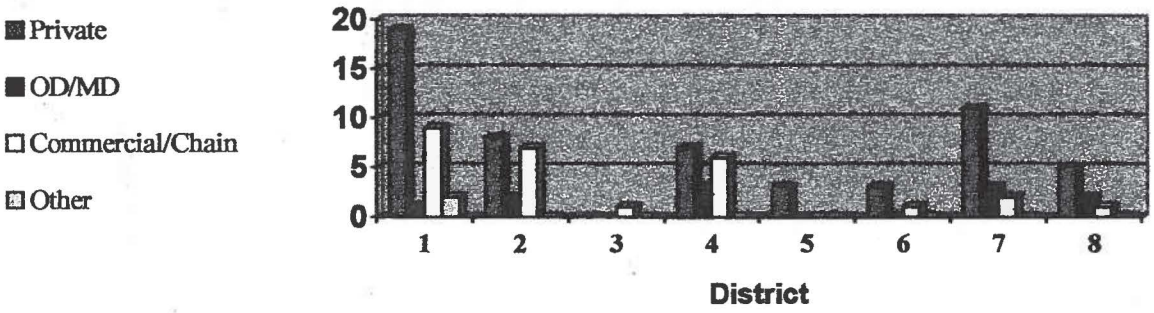


Figure 4: Practice Type/Settings by District



The total number of offices having computerized patient records was found to be 32 out of 96 or 33.3%. By district, offices with computerized patient records were 51.6% (16/31) for District 1, 23.5% (4/17) for District 2, 0% (0/1) for District 3, 12.5% (2/16) for District 4, 66.7% (2/3) for District 5, 50% (2/4) for District 6, 18.8% (3/16) for District 7, and 37.5% (3/8) for District 8.

For the average percent of time spent with each specific aspect of patient care, most doctors who responded to the survey, accounted for a total of more than one hundred percent of their time. Therefore, Table 5 shows the weighted calculated values for each aspect of patient

care out of one hundred percent. Also, in calculating the data for this part of the survey, since ranges of percent time were circled by the respondents, the following values were given to the respective choices found on the survey: 0%=0, <10%=5, 11-30%=21, 31-49%=40, 50-75%=63, 76-90%=83, and >90%=95. The category "other" for a specific aspect of care rendered the following responses; computer vision syndrome, practice management, and hospital rehabilitation. Therefore other includes all of the mentioned aspects of care in the respective row of Table 5.

Table 5: Average % Time Spent With Specific Aspects of Patient Care

	Overall	Private	OD/MD	Chain	Other
Primary Care	37.1%	36.0%	31.9%	40.2%	40.8%
Soft Contact Lenses	18.5%	21.4%	14.5%	18.4%	30.0%
RGP Contact Lenses	4.6%	5.6%	6.2%	3.9%	2.6%
Other Specialty Contact Lenses	1.9%	1.8%	3.6%	1.6%	2.6%
Pediatrics	8.1%	9.1%	5.2%	8.4%	10.9%
Visual Information Processing Assessments (VIPA's)	2.3%	3.1%	1.0%	2.1%	0%
Vision Therapy	3.3%	3.6%	1.4%	2.3%	1.3%
Ocular Disease Management	11.5%	9.2%	19.9%	12.5%	6.7%
Pre/Post-Surgical Co-Management	8.5%	6.7%	11.9%	7.2%	1.3%
Special Needs/Disabled/Nursing Home Populations	1.8%	1.3%	1.7%	2.3%	2.6%
Basic Low Vision	1.1%	1.3%	1.9%	0.7%	1.3%
Advanced Low Vision	0.9%	0.2%	1.0%	0.4%	0%
Other	0.5%	0.7%	0%	0%	0%

Discussion

According to this study, the average Michigan OD works about thirty-eight to forty hours per week and spends about twenty to twenty-five minutes with each patient in the examination room. It is interesting that in Michigan, OD's in District 1 (counties surrounding the metropolitan Detroit area) worked the highest mean number of hours per week at 40.3. Also, of particular interest is the fact that, even in this day and age, when technology reins high, only about one-third of optometrists in Michigan are utilizing computerized patient records. Although

most Michigan OD's are still working in the private practice setting (58%), chain or commercial practicing OD's make up 28% of the OD population sample, and OD's working for or along with MD's make up another 12%.

How do the average daily practices of these three types of OD's differ? It is interesting to note that compared to the average practitioner, the OD/MD doctor spends more of his/her time dealing not only with aspects of care such as ocular disease and pre/post-surgical management, but also with RGP contact lenses, other specialty contact lenses, and both basic and advanced low vision care. On the other hand, compared to the average OD, the private practicing doctor spends more time on aspects of care such as soft contact lenses, pediatrics, VIPA's, and vision therapy. The commercial or chain practicing doctors spend a higher than average amount of their time on primary care and special needs populations. Surprisingly, this study also found that the commercial or chain practicing OD spends a high amount of his/her time managing ocular disease.

The areas of patient care that most OD's reported spending most of their time on were primary care, soft contact lenses, ocular disease management, pre/post-surgical co-management, and pediatrics. Almost 85% of the average OD's time is spent in these areas of patient care. Therefore, it becomes an uncertainty whether any OD can really claim to be a "specialist" in any of these mentioned areas.

Clearly, limitation to this study existed in the relatively small population sample size. Further investigation using greater numbers of respondents would greatly add to research concerned with the establishment of guidelines for optometric specialties. In particular, resident-trained OD's could be surveyed to specifically correlate their residency training with time spent in specific aspects of specialized patient care in their average daily practice settings.

Since guidelines for OD "specialists" have yet been established, it can only be presumed that in order for one to consider him/herself a specialist in a particular aspect of patient care, that he or she should spend more of average day than the average OD giving that type of care. According to this study, in general private practitioners in Michigan spend high percentages of their time doing VIPA's and vision therapy. In theory, perhaps the private OD can be deemed the "VIPA/VT specialist" in Michigan. OD/MD practicing doctors could conceivably be considered Michigan's optometric specialists in the areas of RGP's, other specialty contact lens fittings, and low vision. Whereas doctors practicing in commercial settings could theoretically be regarded as the state's optometric specialists in caring for special needs, disabled, and nursing home patients. Of course, these are only theories based on the data from this study, and further guidelines need to be established before any optometrist should consider him/herself a specialist in any particular area of patient care.

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