

**A Look at the Effect the *TPA Legislation*
has had on a Primary Care Optometric Setting**

OPTM 797

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The purpose of this study was to determine the impact the Michigan's Therapeutic Pharmaceutical Agents legislation has had on a Primary Care Optometric Practice. The study looked at the number of patient referrals from the Michigan College of Optometry at Ferris State University before the TPA law was in effect, and compared them to the referral rate soon after the law was passed.

Enrolled House Bill No. 4331, Act No. 384 was approved by the Governor on December 29, 1994 and filed with the Secretary of State the same day. The essence of the new law is found in Section 17401 part (d) where it defines a **therapeutic pharmaceutical agent** as a "topically administered prescription drug or other topically administered drug used for the purpose of correcting, remedying, or relieving a defect or abnormal condition of the anterior segment of the human eye, or for the purpose of correcting, remedying, or relieving the effects of a defect or abnormal condition of the anterior segment of the human eye".

After the law was passed, all faculty members of the Michigan College of Optometry were TPA licensed by December of 1995, which meant that starting January, 1996, each member had prescription writing privileges. All clinical data for the study was received from the files from the MCO Clinic. The first 180 exams completed at the beginning of the winter 1995 term were used as the pre-TPA sample, and the post-TPA group was compiled by using the first 180 presentations to the clinic in the winter term of 1996.

The process of data collection entailed looking through the files of the first 180 patients of each respective term and obtaining required information. The data collected from the 1995 sample included: date of presentation, primary and secondary diagnoses along with the treatment provided. Additional data collected included the reason for presentation along with any return visits that were required. The same information was collected for the 1996 sample.

The following are the major conclusions that can be drawn from the 1995 sample. Complete results can be found in Tables 1- 3. Of the 180 patients sampled, 129 had a primary refractive diagnosis. This correlates to 71.67%. The main focus of the study was the results of the treatment section. Here, 40.0% were given spectacle prescriptions. However, if contact lenses are included in all refractive corrective measures, this number goes up to 58.89%. If one looks at the total number of refractive diagnoses made either as a primary or secondary diagnosis, then 84.45% were refractive. In turn, the total number of spectacle and contact lenses used as treatment was 64.4%.

The total number of referrals to ophthalmologists was 5 out of the 180 cases (2.78%). This includes all medical and surgical referrals. The medical referrals alone comprised 1.0%. This total however included one case that was already receiving glaucoma treatment.

Over the counter medications that were used as treatment include artificial tears and lubricating ointments. These were used as the primary treatment in 4.4% of the cases. There was one case of pre - TPA licensing where a therapeutic agent was used. In this particular case, tobramycin ointment was administered in conjunction with a pressure patch to treat a corneal abrasion. No medication was prescribed for this case through the school or an outside doctor.

In the 1996 sample, the results differed slightly. Here a total of 138 or 76.67% had a primary refractive diagnosis. Of these, the primary treatment was 55.0% spectacle prescription, and 10.56% contact lenses, for a total optical correction treatment of 65.56%. If one looks at the total of both primary and secondary diagnoses, the percentage jumps to 96.67% of the cases. Treatment changes to 59.4% for spectacle and 70% for spectacle and contact lenses.

All referrals for primary and secondary diagnoses of a medical nature that were made to an ophthalmologist totaled 1% (2 out of 180). Here, one patient was already receiving glaucoma treatment and was returning for further follow- up. The other was referred for retinal problems. A statistic that can be looked at in the 1996 sample compared to the 1995 sample is the number of prescriptions written. For various conditions, 2.20% (4 out of 180) of patients were given a therapeutic prescription. Also, over the counter medications consisting of artificial tears were used in 5.0% of the cases in 1996.

When the two samples are compared, the total referral rate decreased. In 1995, 2.78% of the patients were referred compared to 1% in 1996. The rate in 1996 probably would have been close to 3% if optometrists were not given the privilege of writing prescriptions. This conclusion can be drawn from the fact that 2.20% of the 1996 sample were given prescriptions for therapeutic agents, where in 1995 these patients would have needed a referral to an outside doctor.

It does not appear that a large percentage of patients were referred before TPA legislation. However, using this study as a basis, an optometrist is keeping the 2.20% of his/her practice that would have been referred in the past. From this study, only 4 patients were referred, but the sample size is small. If this percentage were extrapolated to the number of patients seen in a year, it could mean significant numbers that remain under the optometrist's care.

One also has to look at the faults of this study. First, it was a small sample size for each of the respective years. Secondly, referral rates will be different with each different patient base. The College of Optometry, because of its location on a college campus, has an average younger patient population with less ocular conditions that require surgical and medical referrals. The third and most notable fault was the fact that some faculty members were licensed before others but we included them as doctors in our pre-TPA sample. Perhaps a more accurate assessment would have been 1994 samples (truly pre-TPA) compared with 1995 samples, but once again this would not have been correct because not *every* faculty member had license writing privileges until December, 1995.

The advent of the TPA legislation marks a significant, optometric milestone which has made a remarkable impact on defining the scope of optometry. Prior to TPA legislation, any anterior chamber anomaly requiring a pharmaceutical agent for treatment required a referral to an ophthalmologist or other medical doctor. Now, if it falls within the optometrist's capability and comfort level, he/she can prescribe medication to their patient and save them the inconvenience of seeking the same care elsewhere.

Through our study, we have concluded that the post-TPA legislation referral rate for anterior segment treatment has decreased, although these numbers are not clinically significant because of the small sample size. We also conclude that a primary care optometrist cannot rely on writing prescriptions as a major source of income.

L.J. Catania and J.S. Roberts in June 1977 subdivided eye care by types. The three main categories included: functional (with refractive, contact lenses, visual training and low vision as the subtypes), ocular (with preventative ocular examination, acute, chronic anterior, and posterior as the subtypes) and surgical (which involved elective and sight saving). They found that "functional" constituted 70.6% of all eye care, "ocular" was 24.5% and "surgical" consisted of 4.9%. Although this study was done two decades ago, the numbers still correlate with our findings.

It is evident that the majority of patients who came to the MCO Clinic were treated with a spectacle or contact lens prescription versus a topical therapeutic drug. Once again, this will vary with each different sample size and population. If this study

were to be repeated with a 1995 sample versus a 1997 sample, the numbers of therapeutic prescriptions written and the decrease in referrals might be clinically significant simply due to the prolonged exposure to the TPA legislation and due to more experience.

1995 RESULTS SUMMARY

Table 1 a: Treatments for Primary Diagnoses	
Spectacle Rx	72
Soft Contact Lenses	31
Monitor	21
No treatment	13
Artificial Tears	7
Lid Scrubs	5
Patient Education	4
RGP lenses	3
Binocular Vision Work-up	3
Letter to General Physician	3
Vision Therapy	2
Amsler Grid	2
Referral for Fluorescein Angiography	1
Hand Magnifier	1
Referral to Pediatrician	1
Epilation	1
RGP lens modification	1
Referral to Dr. Palmer	1
Continue drops from ER	1
Ointment at night	1
Referral to Dr. Crew	1
Ung at night, referral to corneal specialist	1
Tobrex Rx	1
Return to MD for follow-up	1
Developmental exam	1
TOTAL	180

Table 1 b: Treatments for Secondary Diagnoses	
Monitor	15
Spectacle Rx	8
Patient Education	7
Lid Scrubs	5
Vision Therapy	2
Soft Contact Lenses	2
Visual Field	1
Binocular Vision Work-up	1
Ocuvite	1
Artificial Tears	1

1996 RESULTS SUMMARY

Spectacle Rx	99
Monitor	22
Soft Contact Lenses	17
No treatment	8
Continue CL wear	4
Pharmaceutical Rx	4
Lid scrubs and Artificial Tears	3
Lid Scrubs and Warm Compresses	3
Vision Therapy	3
Patient Education	2
RGP lenses	2
Low vision device	1
Referral	1
Discontinue CL wear	1
Finish antibiotic	1
Ointment at night	1
Continue meds by Dr. Crew	1
Developmental exam	1
TOTAL	180

Table 2 b: Treatments for Secondary Diagnoses	
Monitor	19
Spectacle Rx	8
Patient Education	2
Lid Scrubs and compresses	4
Lid Scrubs and ointment	1
Artificial Tears	6
Visual Field	1
Referral to primary physician	1
Referral to manage glaucoma	1
Blood pressure check	1
Amsler	2

TABLE OF COMPARISON

Table 3: 1995 Percentages compared to 1996 Percentages		
	1995	1996
Spectacle Rx	40.00%	55.00%
Contacts	18.89%	10.50%
All refractive methods of correction	58.89%	65.56%
Monitoring patients condition	11.67%	12.22%
All referrals (2)	2.78%	1.00%
Referrals for glaucoma follow-up	0.50%	0.50%
Referral for medications	1.00%	0.00%
Referral to primary care physician for meds	0.50%	0.00%
Rx prescribed	0.50%	2.20%

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