## A Survey of Michigan Optometrists Involved with Vision Therapy

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#### ABSTRACT:

Background: While Vision Therapy (VT) is an option that is available to every optometrist in practice, it's percentage of utilization is not well documented. VT's efficacy has been noted on hundreds of articles and even it's effect on the patient's quality of life has been recorded.

(1,4,5,6,7,8) VT can "improve visual efficiency and visual processing, allowing the individual to be more responsive to educational instruction." (10) Optometrists interested in pursuing this specialty can find that a precise catalog of essential equipment and procedures is difficult to locate. There are literally hundreds of devices and techniques available to practitioners wishing to expand their practice via these valuable tools.(a,b,c,d)

The purpose of this study was to identify optometrists in associations who are involved in vision therapy and vision development; to establish the persons involved with VT who are employing classic VT and/or more global VT in addition to those dealing with Learning Disabled populations; to determine which procedures and what equipment are most frequently utilized in the area of VT and to build a directory of referrals for use at the Michigan College of Optometry.

This survey analyzed four basic areas of binocular vision anomalies; visual perception diagnosis, oculomotor or binocular dysfunction diagnosis, visual perception management and therapy and oculomotor or binocular dysfunction management and therapy.

Methods: A survey was compiled listing common tests, techniques and devices used by colleages involved with VT at Michigan College of Optometry. In addition, lecture and laboratory material comprising VT was used as a source of material for the survey. Once completed, this 3-page survey was sent out to licensed optometrists in Michigan. (See Appendix I) The list of names was requested from the Board of Optometry at the Michigan Department of Commerce in Lansing, Michigan.

The doctor was asked to respond on what type of VT were they using and what percentage in general of their workload did VT comprise in their practice. We also asked about specific VT and the office; how much of your workload did it encompass? What percentage is in-home, or in-office? (See Table IV). Are there any third-party companies that will cover treatment? (See Table VIIA) It was requested that they send back the survey even if vision therapy was not utilized in their office to aid in our results.

Results: 1454 surveys were mailed and 219 responses received, indicating a 15% response rate. Out of the 219 responses, 155 surveyed were utilizing vision therapy in some form which represented a 70.77% response rate.

Virtually all of the doctors who responded use passive therapy methods (i.e.BI/BO prisms for exo/eso, plus lenses for computer users, etc.) in their practice. As far as the procedures being utilized, 27 out of 155 respondents were using global vs classic procedures. Classic procedures were defined as treatment of amblyopia, strabismus and/or Duane-White syndromes.

Memberships rates in either COVD or the Academy of Optometry showed that 12.78% or 28 of the 155 doctors that were interested in VT and used it in their practice were members in one or both of these groups. The majority was associates of COVD with 13 members out of a total of 28. (See Table VI)

Conclusions: Vision therapy is being utilized in only about 10% of the practices that responded. Of that 10%, less than 2% (1.45%) are incorporating VT into greater than 50% of their workload. The majority of the vision therapy being done is through home activities (68.33%). This 68.33% is higher than expected probably due to the procedures that are being prescribed. It is often presumed that unless you are equipped with a room dedicated solely to VT, that you are not utilizing Vision Therapy into your practice. Basic techniques such as pencil push-ups and Brock String still need the initial visit to the office to explain and demonstrate the technique and discuss a schedule. If we take these necessary interactions between patient and doctor into account, the amount of in-office VT being done might be higher. (See Table V)

In order to enable practitioners from around the state to receive referrals of vision therapy cases from MCO and to allow patients who live a great distance from Big Rapids to receive quality care, a referral directory for the Michigan College of Optometry was compiled which consists of approximately 40 practitioners who will accept patients seen at the College.

Third party insurance was also being billed by the providers in 15.48% of the respondents. 24 out of 155 respondents replied that there were insurance companies that routinely paid for VT procedures. 18 out of 155 respondents(11.61%) noted either 100% or partial self pay for services. (See Table VII)

## Results:

155 Total Respondents to Survey

## Table I

Visual Perception Evaluation

Question: In your practice, which of these following procedures and/or devices are used in conjunction with a visual perception evaluation?

48 out off 155 Respondents use these procedures.

Percentage of total: 30.96%

Procedure	# of users (% of total	) Procedure	# of users(% of total)
VMI	39 (81.25%)	Quick Neurological	8 (14.58%)
		Screening	30
DEM	33 (68.75%)	WJ	7 (14.58%)
TVPS	31 (64.58%)	DTLA	7 (14.58%)
Motor Free	26 (54.17%)	Denver II	6 (12.50%)
Visual Perception			
MFFT	17 (35.42%)	Spache	6 (12.50%)
VADS	16 (33.33%)	PIAT	4 (8.33%)
DDT	16 (33.33%)	Continued Performance	4 (8.33%)
		Test	
Peabody	10 (20.83%)	WISC III	4 (8.33%)
Denver R	9 (18.75%)	KABC	3 (6.25%)

#### Table II

Oculomotor or Binocular dysfunction Diagnosis and Evaluation

Question: In your practice, which of the following procedures and/or devices are used as part of an oculomotor or binocular dysfunction diagnosis or evaluation?

155 out of 155 Respondents use these procedures.

Percentage of total 100%

Procedure	# of users (% of total)	<u>Procedure</u>	# of users (% of total)
Bar/Loose Prism	112 (72.26%)	Fixation Disparity	49 (31.61%)
Dynamic Ret.	110 (70.97%)	Motor Fields	39 (25.16%)
Maddox Rod	107 (69.03%)	DEM	35 (22.58%)
Stereo	82 (52.90%)	Hering-Bielschowsky	26 (16.77%)
Worth 4 Dot	81 (52.25%)	King-Devick	21 (13.54%)
Kinetic Cover Test	75 (48.38%)	Bagolini Lenses	20 (12.90%)
Tracking Methods	71 (45.81%)	After Image Transfer Testing	18 (11.61%)
4 Δ Base Out	61 (39.35%)	Hess-Lancaster	15 (9.67%)
		Troposcope	5 (3.22%)

Section IV Oculomotor or Binocular Dysfunction Management and Therapy Question: In your practice, which of the following procedures and/or devices are used primarily for oculomotor or binocular dysfunction management/therapy?

## Table IIIA

## Oculomotor

101 out of 155 respondents use these procedures Percentage of total 65.16%

Procedure	# of users (% of total)
Other Oculomotor	72 (71.28%)
Procedures(closed eye	
rotations, Marsden	
Ball, Hart Charts	
Tracking/Tracing	69 (68.30%)
Procedures	
Electronic Devices	27 (26.73%)
Computer Based	27 (26.73%)
Training	
Rotators	23 (22.77%)

## Table IIIB

#### **Accommodative**

110 out of 155 respondents use these procedures Percentage of total 70.96%

,, ,	f users of total)
Hart Chart	94 (85.54%)
Accommodative Lens Rock	82 (74.54%)
Cheiroscope/Other Instruments	27 (24.54%)
Computer Based Training	21 (19.09%)

## Table IIIC

## Anti-Suppression

120 out of 155 respondents use these procedures Percentage of total 77.42%

Procedure	# of users(% of total)	Procedure	# of users(% of total)
Brock String	93 (77.5%)	Computer Based Training	24 (20%)
Occlusion	93 (77.5%)	Cheiroscope drawing/tracing	23 (19.17%)
Monocular VA Improvement	55 (45.83%)	Brock Posture Board	23 (19.17%)
Polaroid Trainers	49 (40.83%)	GTVT Charts	14 (11.67%)
Anaglyph Trainers	42 (35%)	Translid Binocular Interactor (TBI)	14 (11.67%)
Gross Stereo Quoits/ Circles	38 (31.67%)	Retinal Rivalry	15 (12.5%)
Bar Readers	30 (25%)		

## Table IV

## Vision Therapy and the office

Question: What percentage of your office workload involves these procedures?

138 out of 155 practitioners responded to this question

Percentage of total 89.03%

0-25% 129 (93.47%)

25-50% 5 (3.62%) 50-75% 2 (1.45%)

75-100% 2 (1.45%)

## Table V

#### Percentage of VT in workload

Question: In your treatment plan, do you mostly employ home, in-office, or a combination?

120 out of 155 practitioners responded to this question

Percentage of total 77.42%

Mostly home treatment 82 68.33% Combination of both 37 30.83% Mostly in-office treatment 2 1.67%

## Table VI

#### Optometric Membership

Members in Associations: 28 respondents either in COVD or AAO. This represents 12.78% of total responses and 18% of those interested responses.

Of that	28: <u>COVD</u>		AAO	
	Yes,(no specification)	7	Fellow	4
	Associate	13	Diplomate	1
	Fellow	3		
Total		23		5

## Table VII A

## Vision Therapy and Third Party Pay

Question: What insurance companies have you found that routinely cover these procedures? 24 out of 155 practitioners responded to this portion (15.48%)

Of that 24:

Company	# that bill	Company	# that bill
MESSA	14		
		Great West Life	2
AETNA	12	Metra Health	1
Misc independents	8	HRM	1
VSP	4	Omaha	1
Travelers	4	Metropolitan Life	1
WEYCO	3	CIGNA	1
PHP	3	Self Insured local	1
		Industries	
John Hancock	2		

18 out of the 24 (75%) respondents noted that all or a portion of the VT performed through their practice is self pay.

## Table VIIB

Question: In reference to visual therapy procedures, what percentage of third party pays versus self-pays do you show in your practice?

18out of 155 practitioners responded to this portion (11.61%)

Of that 18:

0-25% 8 25-50% 4 50-75% 6 75-100% 0

75-100% 0 Total 18

#### DISCUSSION

This section of the paper will be devoted to introducing the primary procedures and equipment used by the respondents. In addition, we will make note of some of the other options being used for diagnosis, treament and management by Michigan practitioners that were not included in the survey.

The responses received varied widely. Most of the practitioners who responded were incorporating some form of active vision therapy in their practice. This response is not unsusual if you consider that an optometrist who has no interest in vision therapy will probably neither fill out the questionaire nor return it. Those who took the time to fill out the forms were those who had some time and effort invested in this area of their practice.

#### Visual Perception Evaluation

The tests included in this section are those used in developmental visual information processing (DVIP). This "group of visual cognitive skills used for extracting and organizing visual information from the environment and integrating this information with other sensory modalities and higher cognitive functions" is crucial to proper early development. Everything from understanding the concept of an organized external visual space and proper left-right orientation to visual memory and visual motor integration are included in DVIP. (2)

The VMI was the method used in the majority of the practitioners responding, with 39 out of the 48 respondents that use the VMI (81.25%) utilizing this method. In second place, (with 33 out of 48 respondents 68.75%) was the Developmental Eye Movement Test. It's purpose was to assist the clinician in identifying "poor oculomotor function from a primary automaticity deficit." Since it's introduction in the beginning of the decade by Drs. Garzia, Richman, Nicholson and Gaines, this test is now a integral part of visual processing batteries. (6)

Other procedures used by Michigan optometrists but not included in this portion of the survey were Monroe Visual III, Fine Motor Speed and Precision, TONI-2, Jordan Left-Right reversal test, Lateral Awareness and Directionality test(LAD), Tums-Gardner, Gardner Reversal Tests, accommodative rock techniques, Groffman tracking, grooved pegboard, SUNY pegboard tests, Grey's reading cards, word sentence copy, audio/visual integration test (AVIT), form boards, Piaget L-R Concepts, Denver Developmental, Percon Developmental, Richman/Rosner Developmental, Wepman Auditory, and various computer training programs

#### Oculomotor or Binocular dysfunction Diagnosis and Evaluation

Problems in these areas can be an important factor in reading problems. A great deal of research has been devoted to the overall functioning of the binocular system. The top five most popular techniques; Bar/Loose Prism, Dynamic Retinoscopy and Maddox Rod, stereo(global vs. local) and Worth 4-Dot were being used by at least 50% of the participants. Some of the other procedures submitted to us that are being used by doctors in this category were: cognitive retinoscopy, book retinoscopy, stereoacuity, suppression testing using different size targets, and NRA/PRA.

#### Oculomotor or Binocular Dysfunction Management and Therapy

Problems in proper binocular function can present with symptoms of blur at near, eyestrain, headaches, diplopia, distance blur after reading, fatigue or closing one eye to complete a task. In a study by Gallaway and Schuman on convergence excess patients, 84% of patients reported "a total elimination of symptoms and 12% said their symptomers were improved." Some of the instrumentation included Vectograms, Tranaglyphs, Aperture Rule, Eccentric Circles, loose prisms, Brock string and lenses. (5)

The majority of the respondents in the survey picked the "other" category in this section discussing oculomotor dysfunctions(e.g. closed eye rotations, Marsden Ball, Hart Charts). Other procedures submitted were Brock string, Teletherapy, Red-Green Vectograms, Quoits, flash fixations, static BI/BO anaglyphic cards, orthofusor, Michigan Rock, Michigan trackingPencil Push-ups, spiral push-ups, synoptophore, Hess-Lancaster, Lite-Brite (TM), geo boards, hidden pictures and mazes.

Fitzgerald and Gruning cited the efficacy of "early intervention in acquired accommodative esotropia using a combination of lenses, occlusion and VT." Their procedures emphasized such practices as eye-hand coordination, anti-suppression and monocular fixation in a binocular field (MFBF). (4)

Under accommodative problems, the two most commonly prescribed treatments were Hart Charts (85%) and Accommodative lens rock (74.54%). The Cheiroscope and computer based training were also utilized by approximately 24% of the respondents.

Computerized VT is becoming more widely used in the area of stereopsis and spatial visualization. In a study by Groffman, it was shown when compared to the manipulatives or concrete table-top objects, computerized VT procedures were superior in the areas of time on task, negative behaviors and subject choice of procedure. (7)

#### Anti-Suppression techniques

77.42% of the respondents utilize procedures to overcome suppression. The two most popular were the Brock String and occlusion (77.5%). Others submitted were: Sherman card game, biocular procedures, striated lenses, red light stimulation, Wheatstone stereoscope and Wayne Liquid Crystal.

#### Fusion techniques

Out of the 155 people who responded, 72 use some type of technique for improving fusion, representing 46%. The most popular procedures were various home techniques (i.e. prism rock, LifeSaver Cards and tranaglyphs), and Vectograms. Other procedures being used are included free space with dissociating prisms to develop postural alignment, spiral push-ups, Wayne Liquid Crystal and walk-aways.

Author's note: Copies of the referral list generated from this survey can be obtained by contacting Dr. Dan Wrubel, Michigan College of Optometry, 1310 Cramer Circle, Room 501 Pennock, Big Rapids, MI 49307-0038

## APPENDIX I

The following survey was submitted to licensed practitioners in Michigan:

1. Are you a fellow/associate (circle one) of the College of	of Optometrists in Vision Development (COVD)?
Yes No	
2. Are you a fellow /diplomate (circle one) of the Americ	an Academy of Optometry in the area of VT?
Yes No	
3. Are you a diplomate in Binocular Vision and Perception	on? Yes No
4. Do you use any vision therapy in your practice? Yes_	No
If yes, how often? Daily Weekly Monthl	y
5. Do you incorporate passive therapy methods into your	
for eso's, etc.)? Yes No	
For questions 6 - 10, please consider the following four a  I. Visual perception diagnosis  II. Oculomotor or Binocular dysfunction diagnosis  III. Visual perception management/therapy  IV. Oculomotor or Binocular dysfunction managements  6. In your practice, which of these following procedures as	sis rement/therapy
visual perception evaluation?	
<ul> <li>□ Matching Familiar Figures Tests (MFFT)</li> <li>□ Test of Visual Perceptual Skills (TVPS)</li> <li>□ Detroit Test of Learning Aptitude(DTLA)Series</li> <li>□ Visual Motor Integration Test (VMI)</li> <li>□ Woodcock - Johnson Series (W/J)</li> <li>□ Denver II</li> <li>□ Quick Neurological Screening Test</li> <li>□ PIAT -R Test Series</li> <li>□ Developmental Eye Movements test (DEM)</li> <li>□ Denver Prescreening Developmental Questionnair</li> <li>□ Other - Please specify:</li> </ul>	<ul> <li>□ WISC - III Tests</li> <li>□ K-ABC Series</li> <li>□ Motor Free Visual Perception Test</li> <li>□ Peabody Picture Vocabulary Test</li> <li>□ Dyslexia Determination Test</li> <li>□ Spache Diagnostic Reading Scales</li> </ul>
7. In your practice, which of the following procedures and	d/or devices are used as part of an oculomotor or
binocular dysfunction diagnosis or evaluation?	
☐ Cover Test/Hirschberg ☐ Von Grafe/Phoropter Techniques ☐ DEM ☐ Tracking Methods ☐ Troposcope ☐ Bagolini Lenses ☐ Worth 4-Dot Box ☐ Maddox Rod ☐ Kinetic Cover Test ☐ Dynamic Retinoscopy: MEM Method or Bell Meth	☐ King - Devick ☐ Hering - Bielschowsky ☐ Hess - Lancaster ☐ After Image Transfer Testing ☐ Bar Prism/Loose Prism ☐ 4∆ Base Out ☐ Stereo (global vs local) ☐ Fixation Disparity ☐ Motor Fields (fielding out, red lens test) hod

9. In your practice, which of the following procedures binocular dysfunction management/therapy?  Oculomotor	s and/or devices are used primarily for ocu
☐ Computer Based Training	
☐ Rotators: Upright, Tabletop, Pegboard	
☐ Electronic Devices: Wayne's Saccadic Fixato	
☐ Tracking/Tracing Procedures: Groffman traci Arrow Orientation, Mazes, Dot to Dot, Word	Search, etc.
☐ Other oculomotor procedures: closed eye rota: ☐ Other, please specify:	tions, Hart Charts, Marsden Ball
Accommodative	
☐ Computer Based Training	
☐ Hart Chart procedures: Near/Far Accommoda	tive Facility, Saccadic Jump, Accommodative
☐ Hart Chart procedures: Near/Far Accommoda Near Point Focal Range Extension	
<ul> <li>☐ Hart Chart procedures: Near/Far Accommodation</li> <li>☐ Accommodative Lens Rock Procedures: Alter</li> </ul>	
<ul> <li>☐ Hart Chart procedures: Near/Far Accommodation</li> <li>☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock</li> </ul>	
<ul> <li>☐ Hart Chart procedures: Near/Far Accommodation</li> <li>☐ Accommodative Lens Rock Procedures: Alter</li> </ul>	
☐ Hart Chart procedures: Near/Far Accommodate Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression	nate Lens Rock Lens Rock during Reading, S
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training	nate Lens Rock Lens Rock during Reading, S
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String ☐ Monocular VA Improvement ☐ Polaroid Trainers	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String ☐ Monocular VA Improvement	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String ☐ Monocular VA Improvement ☐ Polaroid Trainers ☐ Occlusion:passive(indirect/direct), active ☐ Other, please specify:  Fusion Techniques	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing □ Translid BinocularInteractor(TBI)
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:  Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String ☐ Monocular VA Improvement ☐ Polaroid Trainers ☐ Occlusion:passive(indirect/direct), active ☐ Other, please specify:  Fusion Techniques ☐ Computer based training	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing □ Translid BinocularInteractor(TBI) □ Bar Readers
☐ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension ☐ Accommodative Lens Rock Procedures: Alter Accommodative Rock ☐ Cheiroscope/Other Instrumentation ☐ Other, please specify:    Anti-Suppression ☐ Computer based training ☐ Brock Posture Board Mazes ☐ Brock String ☐ Monocular VA Improvement ☐ Polaroid Trainers ☐ Occlusion:passive(indirect/direct), active ☐ Other, please specify:    Fusion Techniques ☐ Computer based training ☐ Stereoscope/Keystone/Bioptograms(BI/BO)	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing □ Translid BinocularInteractor(TBI) □ Bar Readers □ Mirror Stereoscope □ Vodnoy Aperture Rule
□ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension □ Accommodative Lens Rock Procedures: Alter Accommodative Rock □ Cheiroscope/Other Instrumentation □ Other, please specify:    Anti-Suppression □ Computer based training □ Brock Posture Board Mazes □ Brock String □ Monocular VA Improvement □ Polaroid Trainers □ Occlusion:passive(indirect/direct), active □ Other, please specify:    Fusion Techniques □ Computer based training □ Stereoscope/Keystone/Bioptograms(BI/BO) □ Vectograms	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing □ Translid BinocularInteractor(TBI) □ Bar Readers □ Mirror Stereoscope □ Vodnoy Aperture Rule □ Troposcope
□ Hart Chart procedures: Near/Far Accommodal Near Point Focal Range Extension □ Accommodative Lens Rock Procedures: Alter Accommodative Rock □ Cheiroscope/Other Instrumentation □ Other, please specify:    Anti-Suppression □ Computer based training □ Brock Posture Board Mazes □ Brock String □ Monocular VA Improvement □ Polaroid Trainers □ Occlusion:passive(indirect/direct), active □ Other, please specify:    Fusion Techniques □ Computer based training □ Stereoscope/Keystone/Bioptograms(BI/BO)	□ Gross Stereo Quoits/Circles □ Retinal Rivalry/Luster □ GTVT Charts □ Anaglyph trainers □ Cheiroscopic Drawing/Tracing □ Translid BinocularInteractor(TBI) □ Bar Readers □ Mirror Stereoscope □ Vodnoy Aperture Rule □ Troposcope

10. What percentage of your office workload involves these procedures?
0-25% 25-50% 50-75% 75-100%
11. How many ongoing cases per week involving VT do you have in your practice?
10 or less 20-30 30-50 greater than 50
12. What insurance companies have you found that routinely cover these procedures? Please list.
13. In reference to visual therapy procedures, what percentage of third party pays versus self-pays do you
show in your practice?
14. In your treatment plan, do you employ:
Mostly home treatment Mostly in-office treatment Combination of both
15. Would you be interested in attending courses in this area? Yes No
16. Would you like referrals for visual therapy to your practice? Yes No
17. Would you be willing to fill out other questionnaires at a later time? Yes No
Please use the following space to enter any other comments or questions.

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- b. Mast Keystone Corporation, 4673 Aircenter Circle, Reno, NV 89502
- c. Wayne Engineering Laboratories, 8242 N. Christiana Ave, Skokie, IL 60076
- d. Titmus Optical Co., PO Box 191, Petersburg, VA 23804

# Referral list of Vision Therapy Providers in Michigan

## Central Michigan

Eaton Rapids Optometry Daniel N. Wrubel, OD 136 S. Main Eaton Rapids, MI 48827 (517) 663-5266

Avery Vision Center 105 S. Ottawa St. Johns, MI 48879 (517) 224-4645

Dennis H. Benedict, OD 916F N. West Avenue Jackson, MI 49202 (517) 784-0132

Douglas Batchelder, OD 904 E. Preston Mt. Pleasant, MI 48858 (517) 773-2020

Suzanne R. Maystead, OD 1311 E. Bridge St. PO Box 290 Portland, MI 48875 (517) 647-7515

> Jamey Seals, OD 408 N. State St. Alma, MI 48801

Roger R. Seelye, OD 307 N. Ball St. Owosso, MI 48867

## Southeastern Michigan

Dr. H.W. Bennett and Associates Bethany M. Lewallen, OD 117 S Main Ann Arbor, MI 48104 (313)665-5522FAX (313)665-5306 Harriet Pelton, OD 280 N. Woodward Birmingham, MI 48009

D. Duncan Patterson, OD 222 East Maumee Street Adrian, MI 49221 (313)265-1580

Michael C. McGrath, OD 31553 W. 10 Mile Rd. Farmington, MI 48836 (810) 478-2280

John P. Jacobi, OD Suburban Optometric Association, P.C. 31330 Schoolcraft Rd. Livonia, MI 48150

Randy G. Houdek, OD 38979 Cherry Hill Westland, MI 48185

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