

THE STATUS OF LOW VISION CERTIFICATION IN THE STATE OF MICHIGAN

by

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ABSTRACT

Background: Low vision rehabilitation services have recently become a topic of interest in the profession of optometry due to the aging population in the United States of America. The National Eye Institute estimates that over the next 30 years, the current number of blind or visually impaired Americans will double because of the aging Baby Boomers.¹ With the estimated increase in the number of Americans with vision related disabilities on the horizon, the need for optometrists who specialize in low vision rehabilitation services will increase. *Methods:* To assess the current status and future need for low vision providers, a survey was conducted involving the optometrists in the State of Michigan. The survey was designed to address the current number of optometrists who are low vision certified and to establish any future need for additional low vision providers in the state. *Results:* Based on the evaluation of survey responses, there is a current shortage of optometrists providing low vision services in the State of Michigan. There are a limited number of optometrists who consider themselves low vision rehabilitation specialists. *Conclusion:* The small number of optometrists in the State of Michigan who practice low vision rehabilitation, including young optometrists, will lead to a shortage of providers for the aging and visually impaired American population seeking low vision rehabilitation services.

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TABLE OF CONTENTS

	Page
LIST OF FIGURES.....	vi
INTRODUCTION.....	1
METHODS.....	5
RESULTS.....	7
DISCUSSION.....	20
APPENDIX	
A. SAMPLE SURVEY INSTRUMENT.....	32

LIST OF FIGURES

Figure		Page
1	Years in Practice.....	8
2	Optometry School Attended.....	9
3	Michigan Distribution Map of Participants.....	10
4	Main Mode of Practice.....	11
5	Satisfaction of Low Vision Education.....	12
6	Provider of Low Vision Services.....	13
7	Monthly Low Vision Consultations.....	14
8	Capacity of Low Vision Services Provided.....	15
9	Classification of Providers.....	15
10	Time Prior to Becoming Low Vision Certified.....	16
11	Primary Reason For Not Being Low Vision Certified.....	17
12	Planning to Become Certified in the Future.....	18
13	Timeline Before Completing Certification.....	18
14	Location of Consulting Low Vision Provider.....	19

INTRODUCTION

Optometrists are primary health care providers for the diagnosis, management, and non-surgical treatment of eye diseases and refractive disorders. Optometrists may choose to serve the general public or work with the elderly, children, partially-sighted persons requiring visual devices, or specialize in contact lenses, sports vision, or vision therapy. The scope of practice of optometry is broad and ever-expanding to include the ability to use topical medications for diagnostic purposes, prescribe topical and/or oral medications for treatment of various disease conditions, and perform invasive and non-invasive procedures, including those with lasers.

The optometric education provided by the universities and colleges of optometry in the United States encompass a wide array of subject areas to aid in developing a well-rounded, educationally diverse clinician. Graduates from an accredited optometric education program cover various topic areas including primary eye care, ocular disease diagnosis and management, pediatric care, binocular vision and vision therapy, contact lenses, neuro-optometry, and low vision rehabilitation. These graduates are able to enter practice immediately upon graduation with no further education or mandatory residency requirements. However, some clinicians may choose to further distinguish themselves as a specialist in a particular area of optometric care either through self-declaration, by participating in a one year residency program, or by completing an additional

certification process. There are currently ten sub-specialty residencies offered by various schools of optometry in the United States which include primary care optometry, family practice optometry, geriatric optometry, community health optometry, cornea and contact lenses, low vision rehabilitation, ocular disease, refractive and ocular surgery, pediatric optometry, and vision therapy and rehabilitation services.²

The area of low vision rehabilitation services has recently become a topic of interest in the profession of optometry due to the aging population in the United States of America. The National Eye Institute estimates that over the next 30 years, the current number of blind or visually impaired Americans will double because of the aging Baby Boomers.¹ With the estimated increase in the number of Americans with vision-related disabilities on the horizon, the need for optometrists who specialize in low vision rehabilitation services will increase.

Optometrists who choose to specialize and practice in the area of low vision can choose to complete the certification process set forth by their individual state optometric association, if one is available. In the state of Michigan, the Michigan Optometric Association low vision certification process is designed to assist licensed optometrists with a dedicated interest to enhance their expertise and demonstrate competency in the provision of low vision care. Certification is a process of self-education but is not a requirement to practice low vision or declare oneself a low vision specialist.³ According to the Michigan Optometric Association website, of the approximately 1,600 optometrists in the State of Michigan, currently only about thirty providers have completed the

certification process even though hundreds of other optometrists practice low vision on a daily basis.^{3,4}

In order to become a certified low vision specialist in Michigan through the Michigan Optometric Association Low Vision Committee, an optometrist must complete the certification process involving several steps. Each hopeful applicant must complete an application, compose a minimum of eight case reports, be interviewed by the committee, sit for a written and, as indicated, a clinical examination. The application covers the very basic identifying information, mailing information, the degree held and the additional items that must be completed before an interview and written examination can be scheduled. A \$50.00 non-refundable fee must also be included to process the application. The eight required case reports must follow the standard Subjective, Objective, Assessment, and Plan (SOAP) format. The cases selected must include patients who meet the criteria of best corrected visual acuity of 20/70 or less or functionally significant visual field loss. At least one case must represent a patient in each of the low vision sub-categories of pediatrics, career/vocational rehabilitation, geriatrics, and the multiply-impaired. The structure of each case report should include a detailed case history, examination of the pathology, results of the visual analysis, low vision devices demonstrated, interpretation of data, recommendations for treatment, and follow-up care. The personal interview involves discussion and questioning on the case reports and courses of action a practitioner would take for certain theoretical patients. The written examination is administered through a member of the Michigan Optometric Association Low Vision Committee at the Michigan College of Optometry at Ferris State University and a passing score of 80% is needed.³

After successful completion of the low vision certification process, the practitioner is declared a “certified low vision specialist”. The certification is valid for a two year period, the same as the standard optometrist license period in the State of Michigan. In order to maintain certification after the licensing period, a point system is used to determine the doctor’s contributions to the low vision rehabilitation field through treatment of low vision patients, attendance at Michigan Optometric Association Low Vision Committee meetings, attendance at low vision symposia and continuing education, teaching, publications, lecture presentations, and other evidence of continuing competency.³

Practitioners who choose to be recognized as a low vision specialist can do so without the requirement of being certified through their respective state optometric association under the classification of a non-certified low vision specialist. According to the Michigan Optometric Association, a non-certified low vision specialist is a Doctor of Optometry in the United States who has had introductory course work in low vision rehabilitation and entry-level clinical care of those with vision impairment or blindness as part of a four year graduate-professional curriculum. Many optometrists in the United States provide low vision rehabilitation in varying degrees, from a dedicated low vision rehabilitation-exclusive practice specialty to providing low vision care in conjunction with primary eye care. Low vision specialists in Michigan that are non-certified have not demonstrated advanced low vision rehabilitation proficiency and continued competency for recertification. Nineteen optometrists are listed as non-certified low vision specialists according to the directory on the Michigan Optometric Association website.³ Many

additional practitioners may practice entry-level low vision and not wish to be classified as a “specialist”.

METHODS

The most appropriate method to gather data is based upon the type of information desired, in order to best understand an area of interest. Various methods of data collection include, but are not limited to, measurements, observations, case-studies, in-person interviews/surveys, over-the-phone interviews/surveys, and mail surveys.

In order to collect data on the current status of low vision providers in the State of Michigan, a survey through the postal mail service was conducted. The use of a mail survey was chosen due to the ease of data collection by those involved and increased efficiency for the subjects and researcher. Participants were able to complete the survey when it was convenient for them. Over-the-phone or in-person surveys were not chosen since they would have been more time consuming and not reached as many participants. Other forms of data collection were not pertinent to this study.

Before any research or data collection could begin, the method of data collection and the involvement of human subjects in the research had to be reviewed and approved to determine that safety would not be jeopardized. An application to the Ferris State University Human Subjects Review Committee was completed for the approval to include human subjects in this research proposal. The Human Subjects Review Committee is an institutional review board charged with the authority to uphold the

federal and university regulations that require all research projects involving human subjects and materials of human origin be reviewed and approved before initiation.⁵ The application process for this research proposal was approved to allow for interaction with human subjects.

A fourteen question survey was carefully developed to address the key areas of this research. A cover letter for the survey was written to provide the human subjects information on the reasoning behind the research and the directions for survey completion. Additionally, the participant's voluntary consent was discussed within the content of the cover letter, and definitions necessary for completion of the survey were also included. The cover letters and surveys were printed, in addition to self-addressed, pre-paid postage envelopes with the Michigan College of Optometry's address. The surveys and return-mail envelopes were folded and stuffed into envelopes and an address label for each subject was placed on the front of the envelope along with adequate postage. The participants were chosen by random selection in the Michigan Optometric Association's 2008 Membership Guide. The participants were to receive the surveys, read the cover letter, and chose whether or not to complete the survey on a voluntary basis. Subjects who chose to participate then completed the survey and placed it in the pre-paid postage return mail envelope. The returned surveys received at the Michigan College Optometry remained sealed and were placed into a holding box until they were retrieved by the student investigator for this research project. The completed surveys were removed from the envelopes, and the participants' responses were entered into a computer software database for analysis.

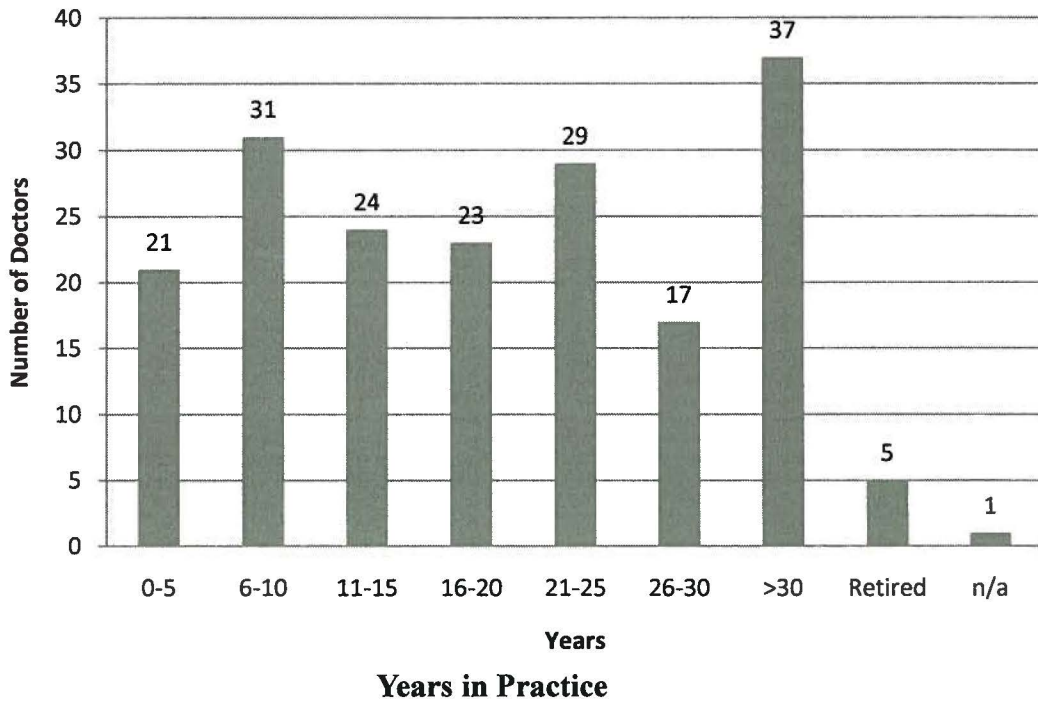
It was important to allow for the participants in this study to complete the survey and return it in a reasonable amount of time. Each participant was given one month to receive, complete, and return the survey. The surveys were retrieved from the Michigan College of Optometry two weeks after the survey deadline giving additional time for any remaining surveys to be returned and included within the data of this study. A sample of the cover letter and survey are provided in Appendix A.

RESULTS

In order to obtain meaningful and significant study outcomes an adequate sample size was needed. The survey for this study was distributed to 325 of the approximately 1,600 optometrists in the State of Michigan who are active members of the Michigan Optometric Association. The survey reached approximately 20% of the optometric population in Michigan, who were located in various counties throughout the entire state. As expected, not all of those contacted to be a part of the study participated. At the conclusion of the time period for the return of the surveys, 188 optometrists of those originally contacted for participation sent back a completed survey, producing a 58% yield.

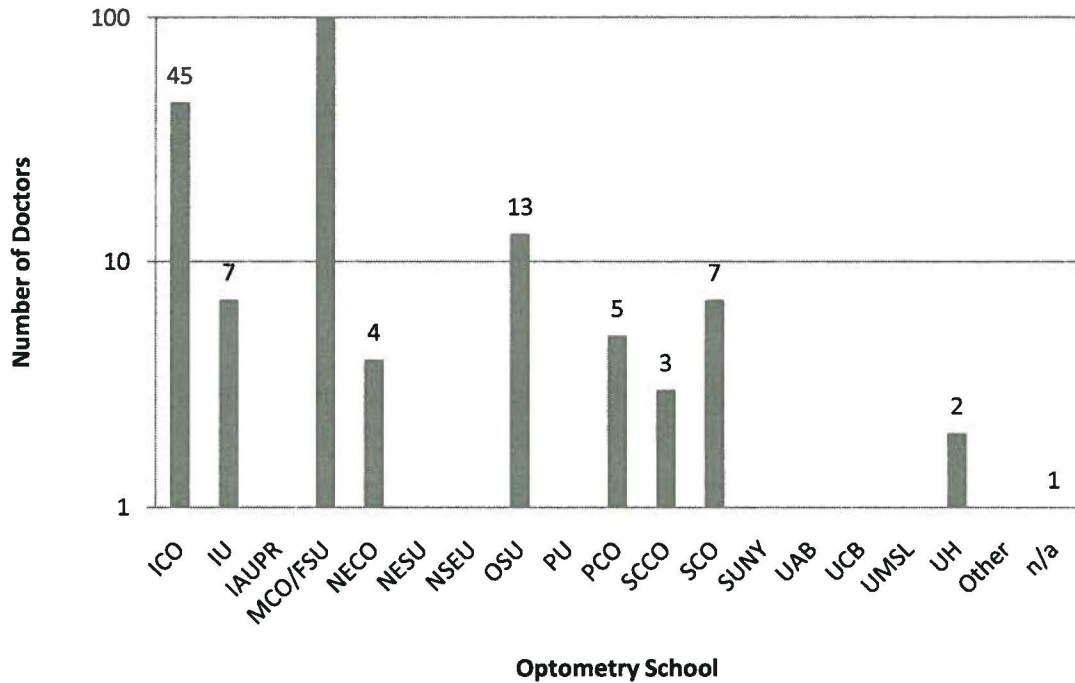
The first question of the survey was used to address the number of years in which the respondent had been in practice since graduation or if he/she was retired. The choices provided for selection were evenly distributed at five years intervals up to and including greater than thirty years in practice, as well as a response for those who were retired. The Years in Practice chart shows the distribution of responses were fairly equal across the

sample size with the fewest in the retired category. The somewhat equal distribution of responses shows that the survey reached a fairly even sampling of practitioners, ranging from recent graduates to those who are retired.



To better understand the background of the respondents and the education they received, each were asked to disclose which of the accredited optometry school programs they attended. All sixteen optometry schools in the United States of America and the Inter American University School of Optometry in Puerto Rico were listed as choices to select. There was additional space provided for the participant to include other programs not listed, such as those in Canada. Since the survey only sampled optometrists in the State of Michigan, it was not surprising that the great majority, 53.7% of respondents, were graduates of the Michigan College of Optometry at Ferris State University. As seen in the Optometry School Attended graph, The Illinois College of Optometry was the second

most common and represented 23.9% of respondents, followed by The Ohio State University with 6.9%, and all other optometry schools with 3.7% or less. No international optometry schools were represented in the survey responses.

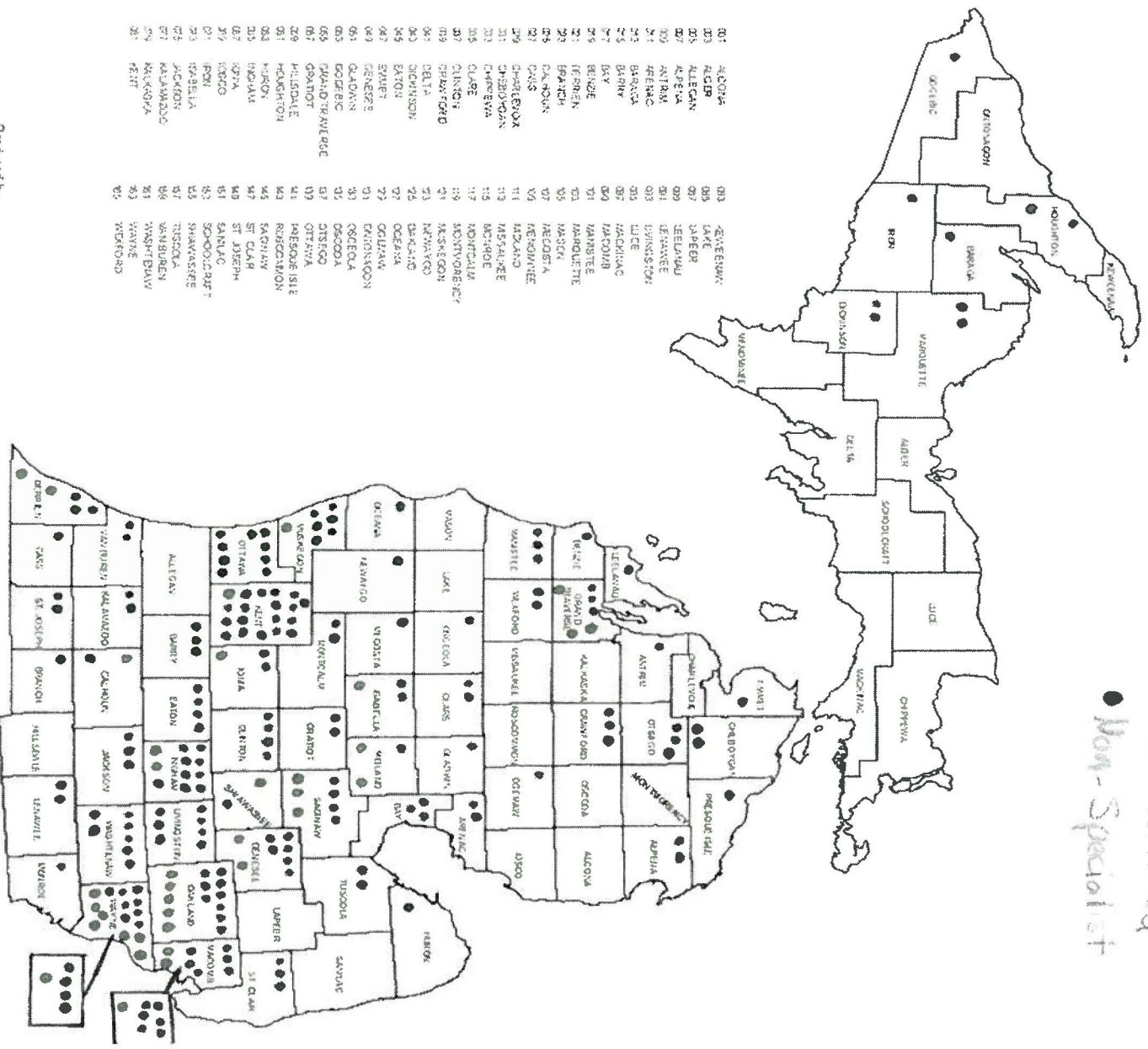


Optometry Schools Attended

The distribution of low vision providers, certified or non-certified, throughout the State of Michigan is important to determine where referral centers for doctors and services currently exist, allowing patients better access to low vision care and rehabilitation, as well as where gaps in providers may create barriers to such care. Each participant was asked to list the county in Michigan containing each practice location. A map of the State of Michigan was utilized and each participant's response was marked on the map to show the approximate location of those who responded. Additionally, those who indicated they were certified low vision specialists were marked differently to study their distribution. The following map represents the statewide distribution of the respondents.

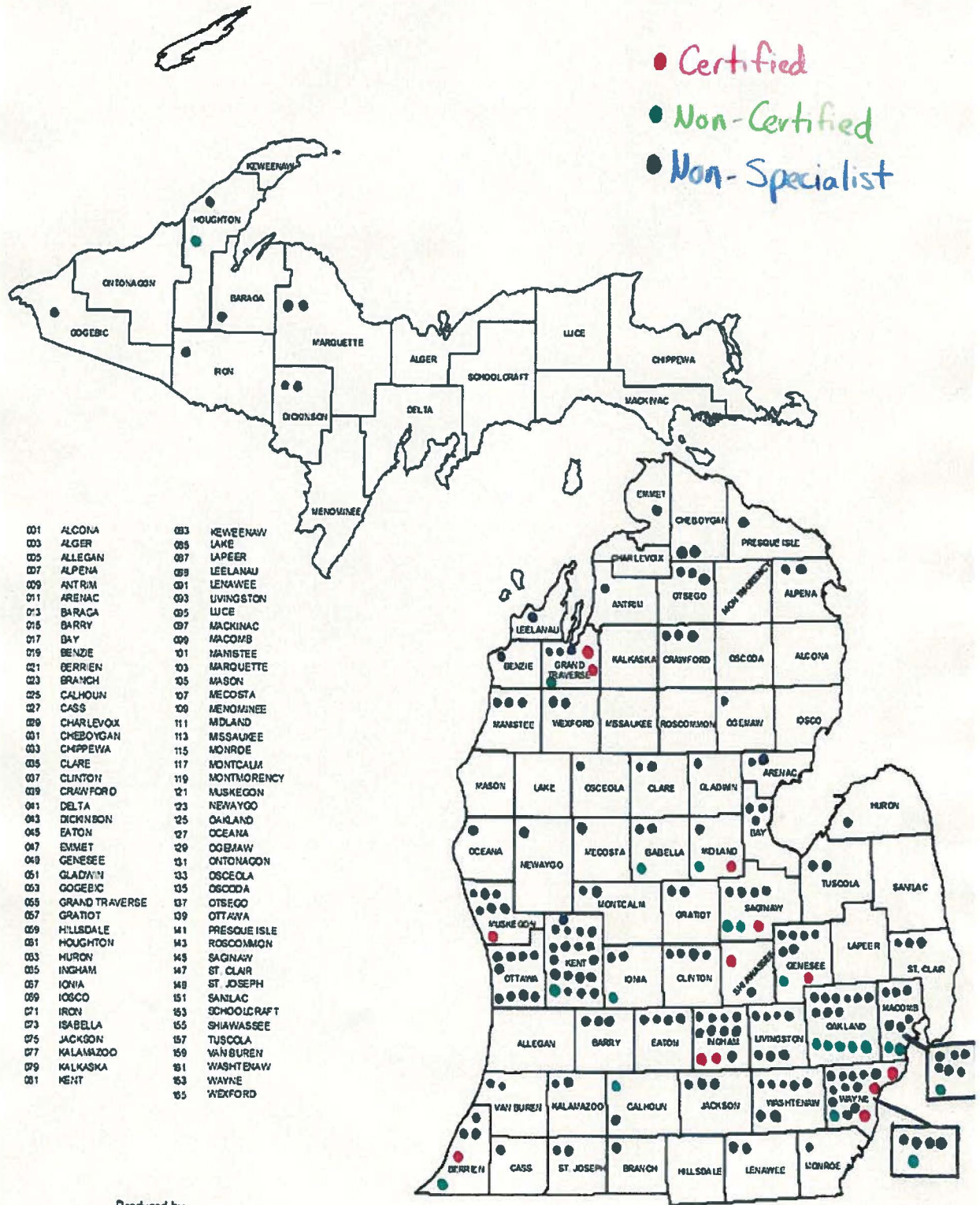


- Certified
- Non-Certified
- Non-Specialist



Produced by
Michigan Information Center
Office of the State Budget
June 29, 2000

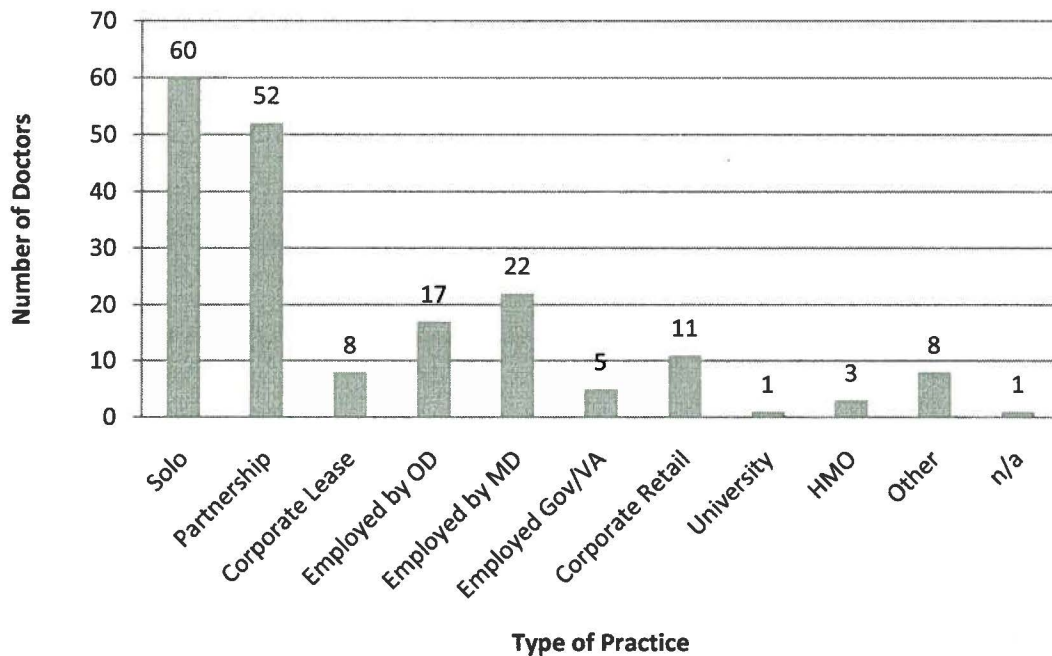
Michigan Distribution Map of Participants⁸



Produced by
 Michigan Information Center
 Office of the State Budget
 June 29, 2000

Michigan Distribution Map of Participants⁸

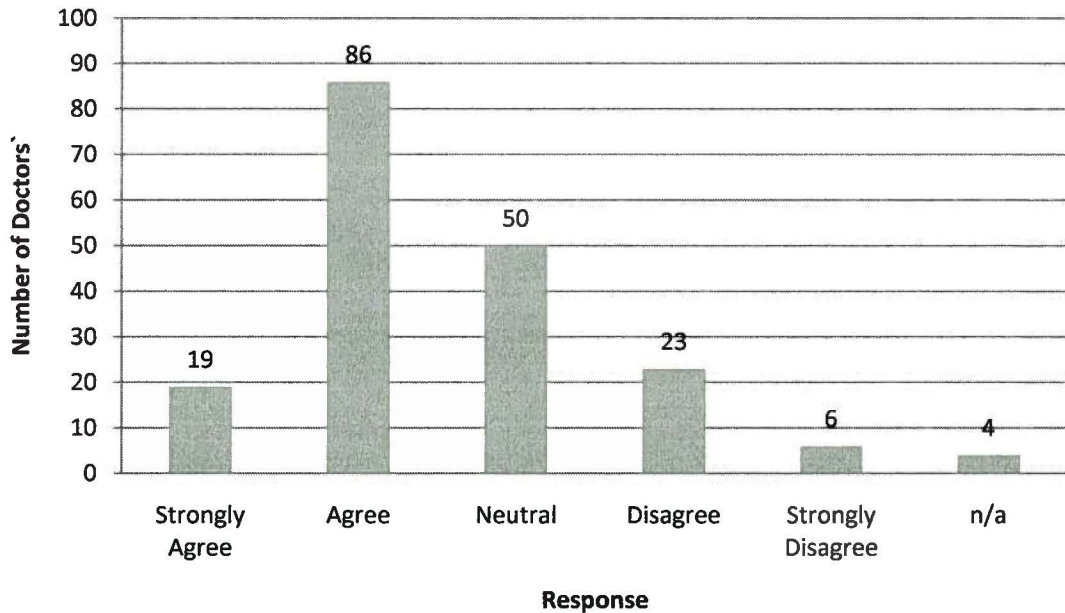
The ability of a practitioner to provide low vision rehabilitation services may be partially related to the mode of practice that the optometrist has chosen. Each participant was asked to identify the main mode of practice that he/she currently works, even though some responders may work in more than one mode of practice. As seen in the Main Mode of Practice diagram, the participants' modes of practice were quite varied. Of those who responded, 31.9% were self employed in a solo practice followed closely by those in a partnership, those employed by an ophthalmologist, and those employed by an optometrists at 27.7%, 11.7%, and 9.0% respectively. There may



Main Mode of Practice

be some cross-over between the respondents who stated they are self-employed in a solo practice and those checking a corporate lease mode of practice as some practitioners may consider themselves under both categories but were only allowed to check one.

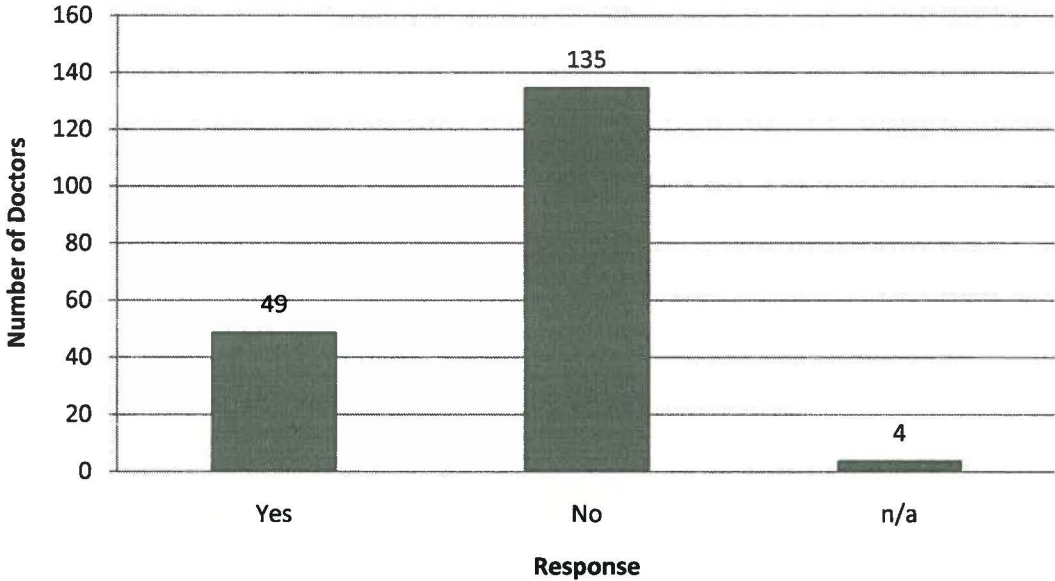
Providers may choose to further differentiate themselves from fellow providers by specializing in an area of interest to them. The choice to specialize in a certain area may be shaped by the experiences he/she had while attending optometry school, ranging from the professor who taught the class to the clinical experiences while an intern. Those who completed the survey were asked how satisfied they were with the level of low vision education they received based upon whether they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement provided. 45.7% of respondents agreed that they were satisfied with the level of low vision education, while 26.6% were neutral, and 12.2% disagreed as observed by the results in the Satisfaction of Low Vision Education chart.



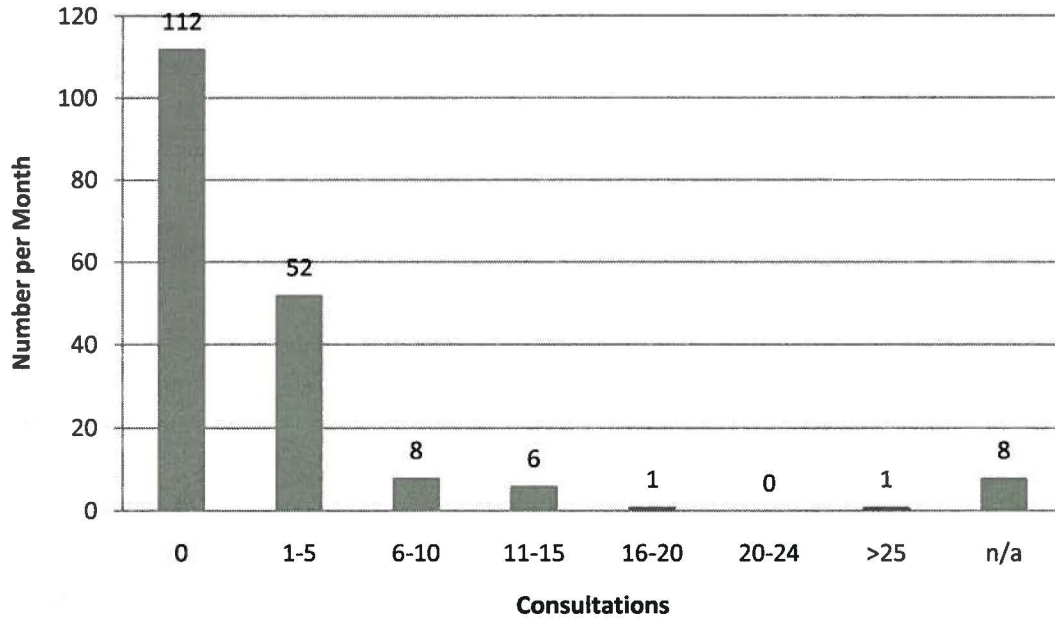
Satisfaction of Low Vision Education

Respondents were also asked if they provided any low vision services to their patients, and if yes, how many low vision consultations they provided in a typical month. A great

majority, 71.8%, stated that they do not provide low vision services to their patients, and 59.6% do not provide low vision consultations in a typical month. The small gap in these numbers indicates that some practitioners may provide consultative low vision care and yet still do not consider themselves providers of low vision services. For the 26.0% of respondents who stated they do provide low vision services, 27.7% of these only provide about one to five consultations monthly. All other respondents combined, accounting for 13.8%, stated they provide anywhere from six to greater than twenty-five consultations in a typical month. The diagrams below, Provider of Low Vision Services and Monthly Low Vision Consultations, demonstrate the trends stated above by the survey participants.



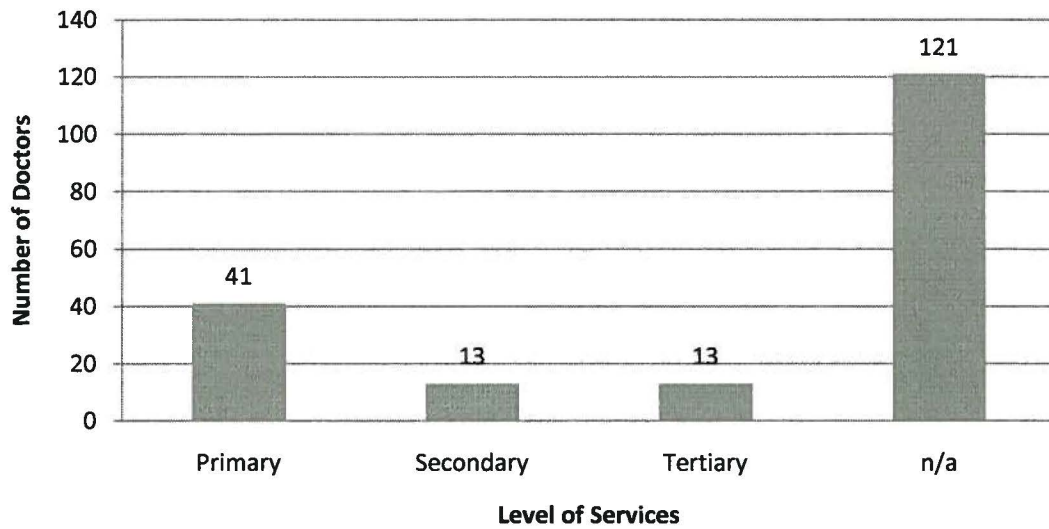
Provider of Low Vision Services



Monthly Low Vision Consultations

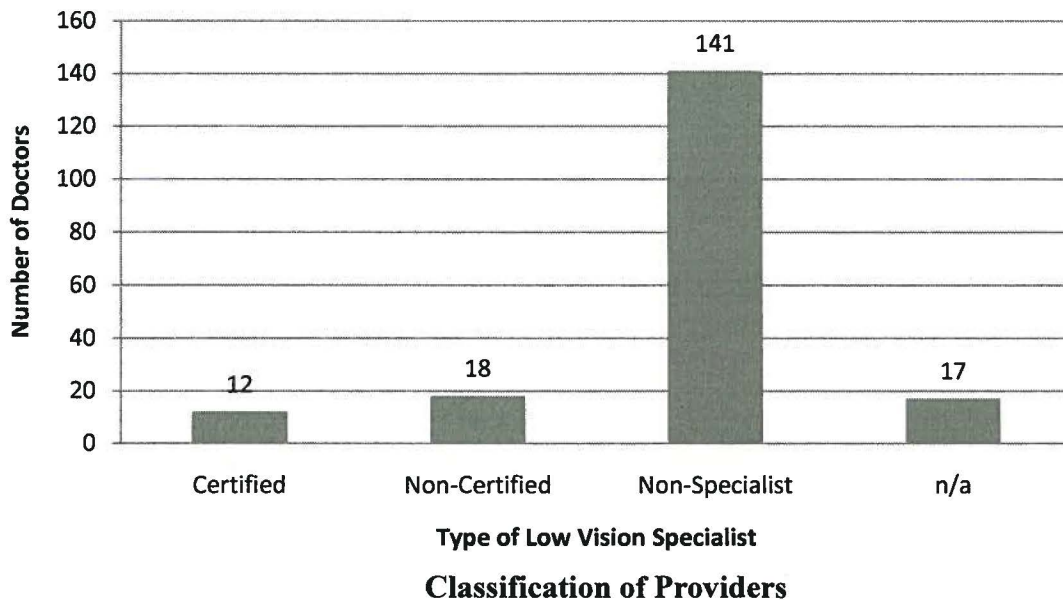
Even though most respondents stated they did not provide low vision services or consultations, they were asked in the next question whether they practiced primary, secondary, or tertiary low vision care or whether it was not applicable to them.

Unfortunately, 64.4% of returned surveys were done so with no response given as seen in the Capacity of Services chart, probably indicating a not applicable response. However, of those who did responded, 21.8% offered primary low vision services and/or devices based upon the descriptions given on the cover letter attached to the survey. Secondary services are provided by 6.9% and tertiary services are only provided by 6.9% of providers.



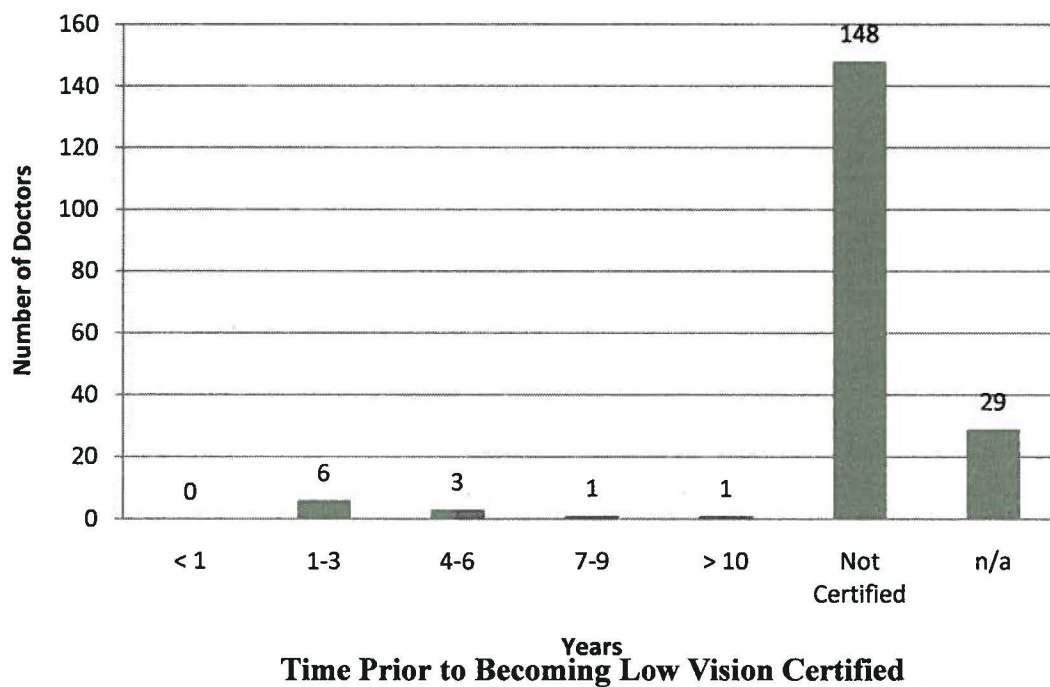
Capacity of Low Vision Services Provided

Next, it was asked of those contributing to the study whether or not he/she was currently a certified low vision specialist, a non-certified low vision specialist, a non-specialist in low vision, or not applicable. Only 6.4% of participants were low vision certified through the Michigan Optometric Association while 10.1% were non-certified low vision specialists based upon the results shown in the diagram, Classification of Providers. Not surprisingly, 75% stated that they did not consider themselves a low vision specialist.



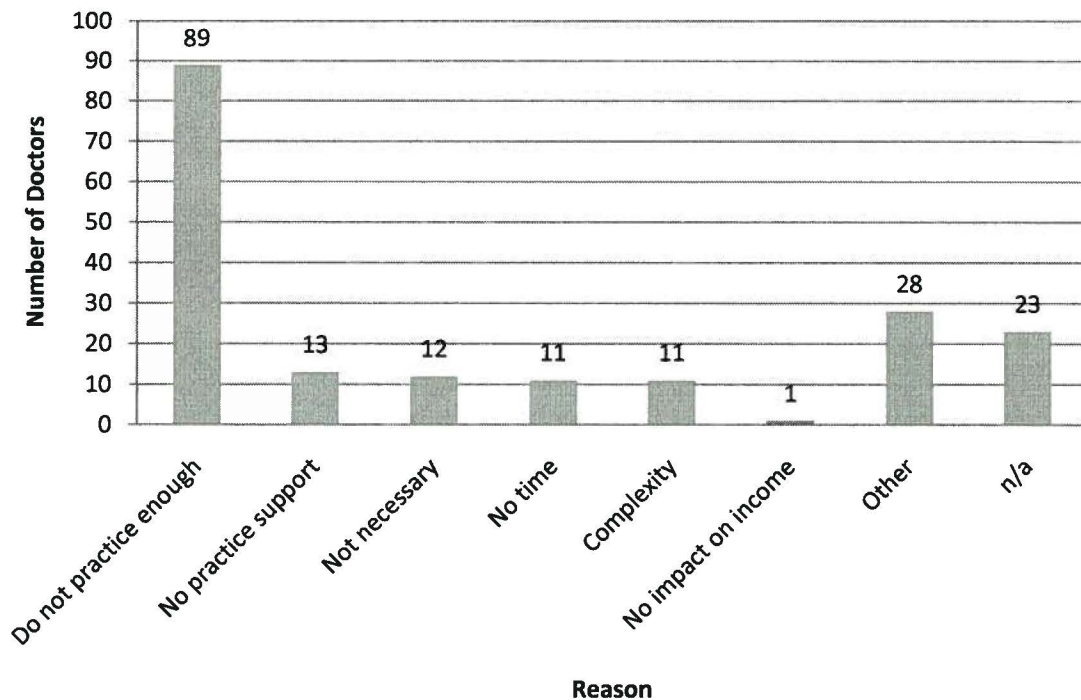
Classification of Providers

In addition, it was of interest to see how long each certified provider was in practice prior to completing the certification process. As seen in graphic representation, Time Prior to Becoming Low Vision Certified, of the twelve respondents who are low vision certified, six became certified one to three years after entering into practice, three became certified after four to six years in practice, one after seven to nine years of practice, and one after greater than ten years of practice. Again, a great majority responded that they do not consider themselves as a low vision specialist or chose not to respond to the question.



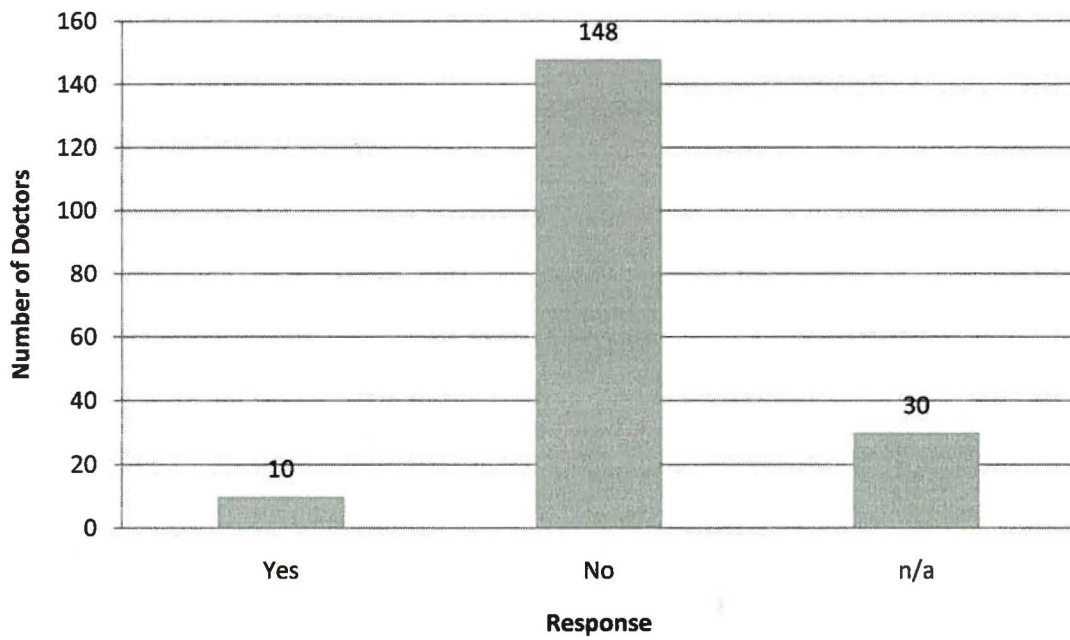
Finally, those participants who stated that they were not certified low vision specialist were asked to select the best reason as to why they are not currently certified. Several choices were given and well as an option to enter their own reason. Potential reasons to choose from included not practicing enough low vision care, no support at his/her current practice, certification is not necessary to practice low vision, not enough time to become certified, complexity of the certification process, or that certification does not have any

impact on practice revenues. By far the greatest reason, as seen in the Primary Reason for Not Being Low Vision Certified diagram, was that the providers do not practice enough low vision to necessitate the need to be certified as evidenced by 47.3% of respondents. However, 14.9% cited other reasons for not obtaining certification, while lack of practice support, certification being unnecessary, not enough time available, and complexity of process were all nearly equal reasons for foregoing certification.

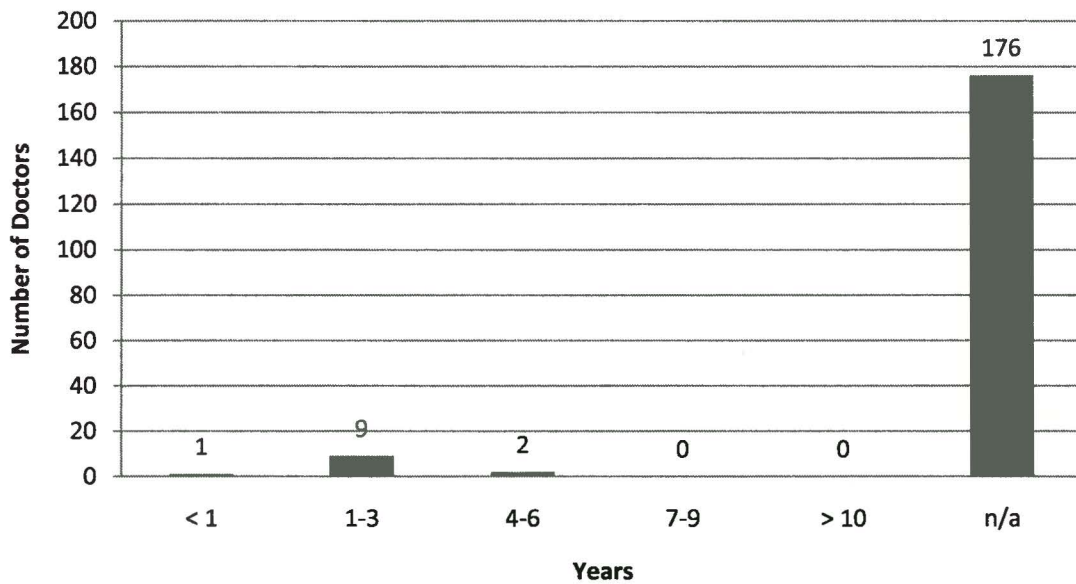


Primary Reason For Not Being Low Vision Certified

Those who stated that they were not low vision certified were also asked if they had any plans to become certified in the future. An overwhelmingly 78.7% said that they were not going to complete the certification process soon. However, of the ten who stated they would, one participant was going to complete it within one year, nine within one to three years, and two within four to six years, as noted in the Planning to Become Low Vision Certified chart and the diagram Timeline Before Completing Certification, located below.

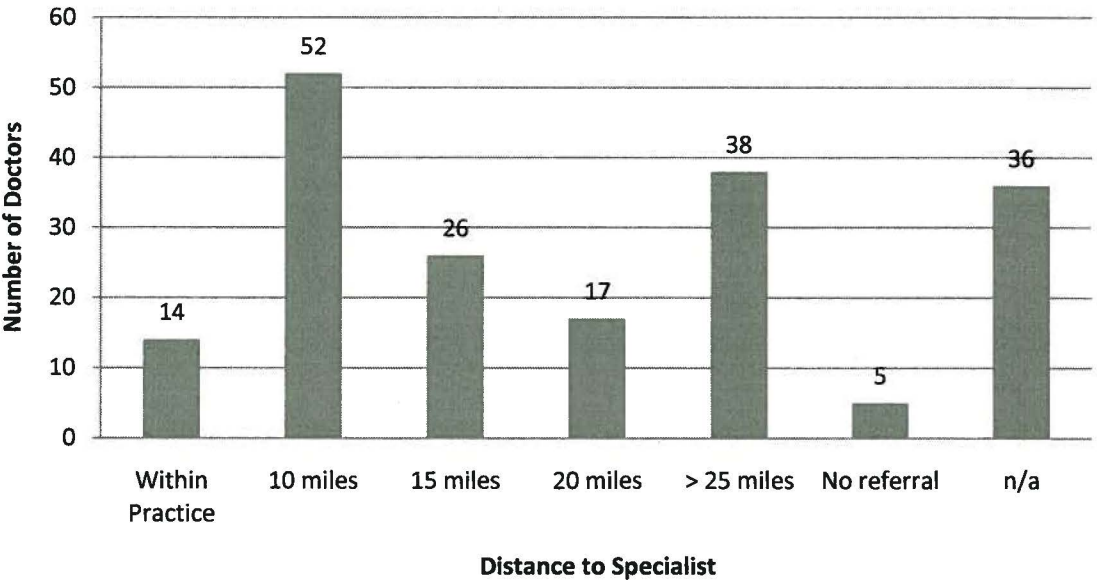


Planning to Become Certified in Future



Timeline Before Completing Certification

Additionally, with the great majority of those contributing to this study not practicing low vision rehabilitation, it was investigated as to where these practitioners refer their low vision patients for further care. The question addressed whether a fellow provider practicing low vision was located within the same practice or if services were sought at another practice nearby. As evidenced in the Location of Consulting Low Vision Providers figure, 27.7% of respondents send their patients to another provider within ten miles of his/her office, while 20.2% send patients greater than twenty-five miles away for care. Following behind in percentage are those who refer to a specialist fifteen miles away, twenty miles away, and those who refer to another doctor within the practice, respectively. Five providers stated they do not refer their patients. Thirty-six providers stated that the question was non-applicable, most likely indicating that either they do not refer their patients or they take care of the patient's needs themselves.



Location of Consulting Low Vision Provider

DISCUSSION

Low vision rehabilitation services have recently become a topic of interest in the profession of optometry due to the aging population in the United States of America. The diagnosis and treatment, including low vision rehabilitation, of permanent vision impairment due to ocular disease and trauma are gaining increased emphasis around the world and in the United States of America. The compelling need to expand services for people with vision impairment or blindness is exemplified by the increasing aging population and related factors.

The prevalence of vision impairment and blindness, those with 20/40 best-corrected visual acuity to no light perception or total blindness, in the United States of America for people over 40 years of age is 2.85%. Michigan's vision impairment and blindness prevalence rate ranks 32nd in the United States of America with a rate of 2.72%, or 27.2 per thousand, which equates to an estimated 26,552 cases. In addition to the older adult visually impaired and blind population, the Michigan Commission for the Blind estimates that 1,200 children (school-aged, 20/70 to total blindness) are eligible for low vision services. Using the Michigan Commission for the Blind estimates, the prevalence of vision impairment and blindness is estimated to be 0.05% on the basis of a population of under-18-year-olds in 2000. An estimate of vision impairment and blindness prevalence in Michigan for young adults, ages 18-40 years, provided by the American Foundation for the Blind is 0.6%, approximately 22,900 people in Michigan as of 2004. Averaging

the prevalence rates for the above three age groups, the total prevalence of vision impairment and blindness in Michigan is estimated to be 1.12%.⁶

With the total prevalence of vision impairment and blindness in the State of Michigan at greater than one percent, there is certainly a shortage of optometrists who provide or are going to provide low vision rehabilitation services to the people of Michigan. Based upon responses by survey participants, only 26.0% of those polled stated that they provide low vision services. This means that only an estimated 416 of the 1,600 optometrists in Michigan are available to see the patients requiring these services. With only a possible 416 optometrists practicing low vision in the 83 counties in Michigan, this averages out to be approximately five optometrists per county. Having only five low vision providers per county would produce quite a demanding workload for those providing rehabilitation. For example, in Muskegon County with a population of 170,200 there would be approximately 1,904 people who would be classified as low vision.⁷ This means that each optometrist who practices low vision would be responsible for the care of 381 low vision patients if all patients sought care. Some may argue that this is a manageable amount of low vision patients to oversee, but there is a tremendous amount of chair time involved in evaluating and discussing options, training with devices, and follow-up care needed to ensure success and improvement in the quality of life for the patient.

The distribution and location of low vision practitioners is essential in allowing patients the necessary access to resources and services. The Distribution Map of Participants was constructed based upon the responses given by those who participated with a mark on the

map in each county in which the participant stated he/she currently practiced. The mark is not representative of the city, location, or area within the county that each provider is located. Most of the participants of this study were located near counties containing major metropolitan areas such as Detroit, Lansing, Grand Rapids, Muskegon, and Saginaw. The likelihood of having certified and non-certified providers in a given area can be contributed to the density of the population in that metropolitan area. For example, Wayne County had the most certified and non-certified specialists, demonstrating that a dense population, especially near the Detroit metro area, will increase the likelihood of having low vision specialists in those communities. Grand Rapids, Muskegon, and Ottawa Counties had a significant yield in participants; however, there was only one certified low vision specialist in that tri-county region. Additionally, the Traverse City region had two certified specialists even though the population is comparable to the tri-county area. The Upper Peninsula of Michigan had the fewest number of participants, corresponding to the lower population in that region of the state. Most respondents of the survey from the Upper Peninsula were located primarily near the Wisconsin border, none of which were certified low vision specialists. There were few participants from the central and northern portions of the Lower Peninsula, and none of them were certified or non-certified specialists. Additionally, few participants were included near the Indiana/Ohio/Michigan border; however, there was one certified specialist and one non-certified specialist located in that region.

The distribution of the low vision providers who participated in this study may have been influenced by the random sampling selected from the Michigan Optometric Association 2008 Membership Guide. Some certified and non-certified specialists may have been

excluded from receiving a survey to complete since they were not in the directory.

Unfortunately, not all counties in the State of Michigan were represented in this study.

Due to this, a true representation of the current location and status of low vision providers could not be accurately determined.

The geographic location of an optometrist can influence whether a practitioner decides to provide low vision services, but additional factors in making the decision to specialize in low vision are those who teach low vision rehabilitation during optometry school and the perceived educational background a student received in this area. Some optometrists may or may not have decided to pursue low vision as a specialty based upon their experiences either during their lecture course and/or during their clinical rotations while in optometry school. The enthusiasm, passion, and motivation of the professor teaching the art of low vision can influence clinicians as to whether they choose to practice low vision. Additionally, some of the accredited optometry schools in the United States of America may place more emphasis on low vision rehabilitation than others within their curriculum.

Unfortunately, the choice of optometry school attended may ultimately impact the decision of an optometrist to enter into the specialty of low vision rehabilitation. The participants in this study were asked to rate their level of satisfaction of the quality of low vision education received while attending optometry school. With the focus of this study on the current status of low vision providers in Michigan, it was not surprising to see the greatest number of respondents from the Michigan College of Optometry at Ferris State University. Of those who responded, fifty one out of one hundred and one (50.5%) were

satisfied with their education, while only twenty eight (27.7%) felt neutral about their education. Twelve of the Michigan College of Optometry graduates polled strongly agreed that they were satisfied; however, nine disagreed with their quality of education. On the other hand, those who attended the Illinois College of Optometry were more split on how they felt about the quality of their low vision education; one-third of participants agreed while another one-third felt neutral that the level of education received met their satisfaction. Noteworthy, however, is that a greater majority of respondents either strongly agreed or strongly disagreed, represented by 8.9% in each category or 17.8% of participants who graduated from the Illinois College of Optometry. Optometrists who graduated from The Ohio State University College of Optometry were equally divided, with five who were satisfied and five who were not. Most of the other optometry schools had too small of a sample size or no participants from their school to accurately determine how the graduates rated the quality of low vision education. So it can be seen that the quality of education received during optometry school can have an influence on those who choose to practice some level of rehabilitation. Interestingly, since half of the certified low vision practitioners obtained certification within three years of entering practice, this survey's results show the importance of targeting potential low vision certification candidates within a short time after graduation, perhaps even as graduate doctoral students.

While the optometry school attended may influence some as to whether they pursue a specialty in low vision, the mode of practice they are in may be another influential factor in the determination to become a low vision provider. Optometrists who are self employed independent contractors in retail settings or are employees of corporate

retailers, for example Pearle Vision or Wal-Mart Optical, are less likely to provide low vision services compared to optometrists in other modes of practice. Additionally, optometrists who are either owners of a non-corporate retail business (i.e., solo practice, partnership, or group) or are employed by other optometrists, ophthalmologists, or government agencies will more commonly provide low vision rehabilitation to patients requiring such services. For instance, of those participants who replied that they were either employed by a corporate retailer or self employed through a corporate lease, only two of the twenty optometrists in that category said they provided low vision services to their patients, equating to only 10% in this group. In contrast, of the optometrists who were either in a solo, partnership, or group practice; or employed by an optometrist, ophthalmologist, or government agency, 30% stated that they provide some capacity of low vision services to their patients, resulting in one out of every three optometrists in this group offering these services. Those who replied to the survey may have also had some difficulty in choosing the best classification that described their main mode of practice. Those who are in a solo and partnership practice can still be considered corporate retail, possibly causing some confusion as to the most appropriate choice. Regardless, it is clearly demonstrated from this study that the mode of practice in which an optometrist is involved is related to the likelihood of him/her practicing low vision rehabilitation.

For those who offer low vision rehabilitation services in the many modes of practice, there are various capacities of services which they can provide. The level of services and the type of devices constitute the level of services provided, classified as primary, secondary, or tertiary. Primary low vision services involve prescribing basic optical

devices (i.e., pocket, stand, or handheld magnifiers, prismatic half-eye readers, handheld telescopes, tints, etc.). Secondary low vision services include primary low vision services plus electro-optical devices, bioptic mounted telescopes, telemicroscopes, computer software, closed circuit televisions, etc. Tertiary low vision services encompass primary and secondary low vision services in addition to rehabilitation services, bioptic driving rehabilitation services, orientation/mobility services, support groups, etc.

The capacity of a low vision specialist may determine how many low vision consultations he or she provides. The participants in this study were asked to estimate how many low vision consultations they provided in a typical month. Those who offer primary low vision services and/or devices account for approximately 55.4%, 77.4% of whom provide about one to five consultations per month, while 9.7% provide six to ten, another 9.7% provide eleven to fifteen, but only one participant provide more than twenty five consultations monthly. About 23.2% of providers represent those who offer secondary low vision care; 53.8% who provide one to five consultations, 30.8% providing six to ten, and 15.4% providing eleven to fifteen per month. The highest level of low vision rehabilitation, tertiary service, is only accessible from 21.4% of low vision providers. Similar to the other capacities of low vision services, most providers only had about one to five consultations, representing 58.3%. Additionally, those offering six to ten and eleven to fifteen consultations per month represented 16.7% each, while only one participant in this study offered more than fifteen consultations in a typical month. To summarize, most low vision specialists provided about one to five consultations in a typical month, corresponding to 73.9% of those consultations for low vision rehabilitation. The more consultations provided per month corresponds to fewer

practitioners required to see that case load. Six to ten consultations are provided by about 13.0% of participants, while 10% only offer eleven to fifteen consultations; less than 3% of low vision providers see more than fifteen consultations monthly. Even though certain optometrists may choose to specialize in low vision to a higher degree than others, most practitioners can expect one to five low vision consultations in a typical month regardless.

With those optometrists who offer different capacities of low vision services comes the decision as to whether it would be beneficial or not to become certified. Certification can provide a clinician offering low vision services increased recognition throughout the optometric, medical, governmental and local communities. Participants in this study were asked if they were currently non-certified, if they have any plans to become certified in the near future. An overwhelming 94.7% of respondents stated that they had no intentions of pursuing any aspects of the certification process in the near future. Of the 5.3% who stated that they had plans to become low vision certified, the great majority were considering doing so within the next one to three year period, while only a few considering completing the process within either the next year or in about four to six years, once again emphasizing the importance of triggering certification interest in a timely fashion.

For one reason or another, an optometrist may choose not to specialize in low vision rehabilitation. The participants in this study provided several reasons as to why they have chosen not to seek low vision certification. Many practitioners may provide some level of low vision services; however, they may not have enough volume to constitute

becoming certified. 47.3% of respondents agreed that they do not practice enough low vision that would necessitate certification. On the other hand, 6.9% felt that the state of their practice did not support or allow for low vision services to be offered; therefore completing the certification process would not be necessary if the provider was not going to be involved in those services. Some optometrists may already specialize in low vision without being certified because they feel that certification is not necessary to practice low vision. The profession of optometry does not mandate that those who declare themselves specialist in low vision to be certified. Of those who are not currently certified, 6.4% consider certification a trivial aspect in being permitted to practice low vision rehabilitation. Additionally, some may desire to be certified, however, they do not have enough time to complete the low vision certification process between running their business, managing their family, and other commitments. The complexity of the certification process is another reason for some to forgo the application procedure. The requirements for becoming certified as established by the Michigan Optometric Association Low Vision Committee have several steps and can be time consuming. An equal number of survey respondents, 5.9%, cited limited amount of time and the complexity of obtaining certification as primary reasons for not seeking low vision certification. Only one participant felt that being certified would have no impact on the financial income of the practice. Finally, some participants provided their own reasons for not choosing to become certified. Twelve responders frankly stated that they were not interested in or did not enjoy low vision enough to even consider certification. Three others have a fellow colleague within the same practice that specializes in low vision, while five participants stated that they referred their patients to other low vision providers

in their area. Others provided miscellaneous reasons for having not sought low vision certification such as, “I am seeing enough low vision referrals without being certified and am not looking to grow that aspect of my practice at this time.” Some feel that “patients cannot afford devices or evaluations” and “reimbursement for services/devices compared to chair time are inadequate.” One responder declared, “Certification is not recognized by any other optometric organizations outside of the MOA [Michigan Optometric Association] and MCB [Michigan Commission for the Blind]. You should not have to belong to the MOA to be certified, and I am a MOA member and supporter.” Another participant was passionate stating, “The certification process is too restrictive. I wanted to get certified early on, but could not get certified until I had been practicing three years, I think. By that time, I was busy in my practice. Low vision doctors don’t want others to do it, so they make it difficult. When you’re not busy, like in your first few years, you can’t get certified.” It is clear that those who choose not to become low vision certified do so for very different reasons. Changing the application process may draw more people toward becoming certified, allowing for a simple and less time consuming commitment to complete all of the requirements.

In conclusion, with the increase in the number of elderly who are blind or visually impaired expected to rise, the demand for eye care providers who offer low vision rehabilitation services is also expected to rise. There will likely be a shortage of certified low vision specialists on the horizon as those who are currently certified either do not renew their certification or retire completely from practicing. Regardless, the number of current providers expected to become certified within the next one to five years is not going to be adequate enough to meet the future demand of visually impaired patients.

Several factors may contribute to a practitioner's choice to not seek certification. The geographic location of a provider may influence whether there is a need for a certified low vision specialist. Even though some optometrists may declare themselves as a non-certified low vision specialist, there still exists a need for more optometrists to specialize in low vision. The current distribution of low vision providers is not conducive at meeting patients' needs, especially in the rural areas of northern Lower Michigan and the Upper Peninsula. The rural areas are going to see the greatest need since more specialists tend to be located near major metro areas. Additionally, the mode of practice in which someone practices also has major influence on the likelihood of providing low vision services. Those who have a passion for low vision should be encouraged to become part of a self employed entity or to seek employment by an optometrist, ophthalmologist, or government agency. The satisfaction of low vision rehabilitation education received in optometry school can have a lasting impact on future career paths or trigger interest in practicing low vision. Finally, a review of the policies and procedures for certification approval is necessary. Addressing the complexity or time commitment of the application process may yield an increased interest in low vision, and result in a higher percentage of those non-certified practitioners seeking to become certified. The optometric community in Michigan, as evidenced by this survey, has to address the current status of low vision certification and the number of providers in general now in order to prevent the future shortage of certified low vision specialists to come.

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APPENDIX A

SAMPLE SURVEY INSTRUMENT

October 10, 2008

To Whom It May Concern:

I am currently a fourth year optometry student at the Michigan College of Optometry at Ferris State University. As part of our graduation requirements, we are to conduct a research project in an area of special interest to us. I have chosen to investigate the area of low vision and certification.

The following survey is designed to investigate the current status of low vision optometrists in the State of Michigan. Please take a few minutes to complete the survey regardless if you do or do not provide low vision services for your patients. You indicate your voluntary agreement to participate by completing and returning this questionnaire. Please do not provide any identifying information on the survey. A return envelope has been provided for you to mail the completed survey back to me.

The following definitions are provided for clarification in order to complete the survey:

Low vision is a general term that refers to a permanent functional vision loss due to a wide array of diseases that cannot be corrected by medication, surgery, or glasses, and which results in an impaired ability to perform work, leisure, or activities of daily living.

Primary low vision services involve prescribing basic optical devices (i.e., pocket, stand, or handheld magnifiers, prismatic half-eye readers, handheld telescopes, tints, etc.).

Secondary low vision services involve primary low vision services plus electro-optical devices, bioptic mounted telescopes, telemicroscopes, computer software, closed circuit television, etc. Tertiary low vision services encompass primary and secondary low vision services in addition to rehabilitation services, bioptic driving rehabilitation services, orientation/mobility services, support groups, etc.

Thank you for taking the time to complete this important survey. Please return this survey in the provided envelope at your earliest convenience, preferably on or before November 15, 2008.

Sincerely,

Adam M. Carlson

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- 1) How many years have you been in practice?
 - a. 0-5
 - b. 6-10
 - c. 11-15
 - d. 16-20
 - e. 21-25
 - f. 26-30
 - g. >30
 - h. Retired

- 2) Which optometry school did you attend?
 - a. Illinois College of Optometry
 - b. Indiana University
 - c. Inter American University of Puerto Rico
 - d. Michigan College of Optometry at Ferris State University
 - e. New England College of Optometry
 - f. Northeastern State University
 - g. Nova Southeastern University
 - h. The Ohio State University
 - i. Pacific University
 - j. Pennsylvania College of Optometry
 - k. Southern California College of Optometry
 - l. Southern College of Optometry
 - m. State University of New York
 - n. University of Alabama at Birmingham
 - o. University of California - Berkeley
 - p. University of Missouri at St. Louis
 - q. University of Houston
 - r. Other _____

- 3) In which Michigan county/counties is your practice located?

Please list county/counties: _____

- 4) Which of the following is your main mode of practice?
 - a. Self employed solo practice
 - b. Self employed partnership
 - c. Self employed corporate lease
 - d. Employed by Optometrist(s)
 - e. Employed by Ophthalmologist(s)
 - f. Employed by Government/Military/Veteran Administration Hospital
 - g. Employed by Corporate Retailer
 - h. Employed by University/Academia
 - i. Employed by HMO/Multi-disciplinary
 - j. Other _____

- 5) I am/was satisfied with the quality of low vision education that I received while attending optometry school.
 - a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree

- 6) Do you provide low vision rehabilitation services for your patients?
 - a. Yes
 - b. No

- 7) In a typical month, how many low vision consultations do you provide for patients?
 - a. 0
 - b. 1-5
 - c. 6-10
 - d. 11-15
 - e. 16-20
 - f. 20-24
 - g. >25

- 8) If you practice low vision, which of the following best describes the capacity of services you provide?
 - a. Primary low vision services/devices
 - b. Secondary low vision services/devices
 - c. Tertiary low vision services/devices

- 9) Which of the following best classifies you?
 - a. Certified low vision specialist
 - b. Non-certified low vision specialist
 - c. I would not consider myself a low vision specialist

- 10) How long were you in practice before you became low vision certified?
 - a. < 1 year
 - b. 1-3 years
 - c. 4-6 years
 - d. 7-9 years
 - e. >10 years
 - f. I am not a certified low vision specialist

- 11) If you are not currently low vision certified, what is the primary reason that you have not sought low vision certification?
- I do not practice enough low vision
 - The practice does not support/allow low vision services
 - Certification is not necessary to practice low vision
 - No time to become certified
 - Complexity of certification process
 - Certification would have no impact on the bottom line of practice/personal income
 - Other _____
- 12) If you are not currently certified, do you have plans of becoming certified in the near future?
- Yes
 - No
- 13) If you answered "Yes" to question 12, how long before you plan to complete the certification process?
- < 1 year
 - 1-3 years
 - 4-6 years
 - 7-9 years
 - >10 years
- 14) If you do not practice any low vision, who do you refer your low vision patients to?
- Another doctor within the practice
 - A low vision provider within 10 miles of the office
 - A low vision provider within 15 miles of the office
 - A low vision provider within 20 miles of the office
 - A low vision provider within > 25 miles of the office
 - I do not refer my low vision patients to another doctor