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U.S. Optometrists' Reported Practices and Perceived Barriers for Low Vision Care for Mild Visual Loss

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SIGNIFICANCE: Identification of modifiable barriers to low vision rehabilitation (LVR) can inform efforts to improve practice management of patients with low vision (LV), through, for example, targeted educational programs for optometrists who do not practice LVR.

PURPOSE: Mild vision loss (20/25 to 20/70) is increasing in prevalence among the aging population, yet it is unclear whether near-reading complaints (the highest presenting chief complaint) are being addressed. Studies of LVR provision by U.S. optometrists are currently lacking. This study elucidated self-reported optometric practice patterns for patients with mild vision loss.

METHODS: Anonymous surveys were completed by 229 actively practicing optometrists across the United States. The survey inquired about the frequency of providing LVR for mild vision loss patients and the top barriers that prevent them from offering LVR management (including optical aids or referral).

RESULTS: Compared with those moderately actively practicing LVR, twice as many $(2.08\times)$ practitioners who do not practice any LVR reported that they never prescribe near-reading add power of 4 D or greater for mild vision loss (P < .001). Among those who do not practice LVR, 39 and 11% indicated that they never prescribe any LVR management strategies for patients with visual acuity of 20/25 to 20/40 and 20/50 to 20/70, respectively. The two most commonly reported barriers to LVR indicated by about half of respondents were "cost of the LV exam and/ or devices" and that "patients are not interested or would not go to an LV exam." Nearly a third of providers reported that "it is not feasible to stock magnifiers in office."

CONCLUSIONS: A sizable group of non-LVR providers in the United States may not be addressing the near-vision needs of patients with mild vision loss. Several of the reported top barriers are potentially modifiable through the development of targeted educational programs for providers.

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Visual impairment and low vision are increasing in incidence and prevalence in the United States as the population ages. Although the definition of low vision varies, it is commonly accepted that low vision refers to any visual impairment that cannot be corrected with medicine, surgery, or standard optical intervention. In the United States, macular diseases are the most common cause of vision impairment and the most common condition in patients who present for low vision rehabilitation services. ^{2,3} Reading tasks are frequently cited as the most common chief complaint in patients with vision impairment who present for low vision rehabilitation services. 4,5 Patients with mild vision loss, defined here as best corrected acuity ranging from 20/25 to 20/70 or 0.1 to 0.54 logMAR, binocular distance visual acuity, can experience difficulty with near-reading tasks and other activities of daily living. 3,6 In addition, many rate the quality of their vision as fair or poor.³ Although these patients do not meet the visual criteria for the International Classification of Diseases, 10th Revision, classification for category 1 low vision, they should be referred for low vision rehabilitation care if they experience any functional limitation(s) due to their visual deficit, according to the standard of care described both by the American Optometric Association's Clinical Practice Guidelines for care of the patient with visual impairment and in the Preferred Practice Patterns guidelines of the American Academy of Ophthalmology.⁷

Current literature supports the use of low vision rehabilitation management strategies to improve outcomes for patients who have vision impairment.8 These strategies include using optical aids and other low vision devices to accomplish visually mediated tasks, learning to use other sensory substitution or compensatory techniques, and/or professional support services to assist with mobility or negative psychosocial states. ⁹ Low vision rehabilitation can help patients with moderate to severe low vision improve in their clinical reading ability, as well as overall reading speed. 10 The LOVIT-II study¹¹ demonstrated that basic low vision services (i.e., visual assistive device dispensed at a single in-office training session without ongoing rehabilitation therapy or homework) are effective in patients with mild vision impairment. Although randomized clinical trials are needed to better understand low vision rehabilitation outcomes in patients with mild vision impairment outside of the Veteran's Affairs system, these initial results indicate that basic low vision services can be effectively integrated into a primary care optometric practice.

There have been several studies documenting the perceived barriers to low vision care from the patient's perspective that were conducted in Montreal, Canada⁹; West Virginia¹²; and Australia.¹³ These studies describe the most common barriers to care, which include lack of awareness of low vision rehabilitation services, lack of access to services, and lack of funding for services.¹⁴ There are some areas with virtually no low vision rehabilitation services, but even with access to services, there is limited uptake.⁹ Studies have reported that, in general, fewer than 20% of patients with vision impairment access low vision rehabilitation services.^{13,15} Even in the most ideal setting (i.e., hospital-based ophthalmology practices with low vision rehabilitation care on site), 33% of patients reported no awareness of services.¹⁴ In addition, only half of the patients actually chose to access these services when they were made aware of no-cost services.⁹

Additional research has been done to explore the barriers within the referral process from an ophthalmology service. In a small sample in Canada, lack of awareness of low vision rehabilitation services and misunderstanding of the level of vision loss needed for a referral to low vision rehabilitation services were noted, leading to low referral rates of eligible patients in need of these services.²

This current study seeks to understand barriers reported by optometric providers related to both the provision of and referral to low vision rehabilitation care. Our specific interest was to elucidate self-reported practice patterns among optometrists in a variety of practice settings in the United States for their management of patients with mild vision impairment. The identification of currently perceived barriers, particularly those that are modifiable, will inform targeted education programs and interventions to improve service provision to the population with mild impairment.

METHODS

A survey (Appendix A, available at http://links.lww.com/OPX/A432) was developed and administered to actively practicing optometrists in the United States. The survey was administered either online or in person; participation was anonymous, and completion of the survey implied consent to participate in the study. The study was approved by the New England College of Optometry Institutional Review Board and conformed to the tenets of the Declaration of Helsinki. The surveys were distributed by e-mail (online) to members of the American Academy of Optometry's Comprehensive Eye Care Section and to members of local optometric associations, as well as in person as paper forms distributed at primary care continuing education events in New York; Washington, DC; California; Massachusetts; and Florida in 2017 and 2018. The continuing education programs where surveys were distributed were both regional and national and included the annual Optometry's Meeting sponsored by the American

Optometric Association, as well as continuing education events hosted by colleges of optometry or local optometric associations. A total of 229 actively practicing optometrists successfully completed the survey, which included 101 online responses. The overall response rate was not able to be assessed because the number of survey forms distributed but not completed was not recorded.

The respondents provided information about whether they had completed a residency (an optional year of advanced training after the completion of a 4-year accredited optometric program in the United States or Canada), if the residency included training in low vision rehabilitation, how long they have been in practice, if they consider their practice to currently include low vision rehabilitation services, their practice volume, sex, and any recent low vision continuing education within the past 2 years. Questions regarding practice volume included the average number of all patients seen per day with or without mild visual loss, as well as the number of patients with mild visual loss typically seen in a 2-month period, as estimated by the respondent.

The survey specifically inquired about practice patterns and low vision rehabilitation management for patients with mild vision loss. Low vision rehabilitation interventions in this population were described as follows: prescribing high adds (≥3.00 D), prescribing magnifiers, or referring for low vision consultation. To inquire about practice patterns, the survey asked respondents to identify the top barriers that prevent them from offering these interventions. The respondents were not limited in the number of barriers that they could report on the survey.

Data Analyses

Pearson χ^2 tests were used for comparisons between two binary variables. Multiple logistic regressions were used to evaluate relationships between practice patterns and optometrists' characteristics, with P < .05 defined as statistically significant, using Stata/IC version 15.1 (Stata Corp., College Station, TX).

RESULTS

Study Groups

Responses from survey respondents were analyzed according to four categorical groups: (1) those who are currently engaged in low vision rehabilitation practice but did not complete any residency program (19.3%), (2) those who completed an optometric residency and are engaged in low vision rehabilitation practice (11.8%), (3) those who completed any optometric residency but do not provide low vision rehabilitation care in their practice (25.9%), and (4) those who neither completed any residency program nor provide low vision rehabilitation care (43%).

Table 1 displays the proportion of respondents who reported that they never referred for low vision rehabilitation or never prescribed

For VA 20/25-20/40	Never Rx ≥4 add	Never refer for LVR	No LVR or referral
Do not practice LVR	66.4% (n = 95/143)	52.0% (n = 78/150)	38.6% (n = 54/140)
Practice some LVR	31.8% (n = 20/63)		
For VA 20/50-20/70	Never Rx ≥4 add	Never refer for LVR	No LVR or referral
Do not practice LVR	48.3% (n = 69/143)	18.7% (n = 28/150)	10.7% (n = 15/140)
Practice some LVR	14.3% (n = 9/63)		

adds of 4 D or greater according to whether they practice some low vision rehabilitation and patients' level of visual acuity loss. Twice as many (2.08×) practitioners who do not practice some low vision rehabilitation reported that they never prescribe near-reading add power of 4 D or greater when compared with those who practice some low vision rehabilitation (P < .001), with a greater disparity between these two groups of practitioners for patients with visual acuity of 20/50 to 20/70 (odds ratio, 5.60) than for patients with visual acuity of 20/25 to 20/40 (odds ratio, 4.25). Among practitioners who do not practice some low vision rehabilitation, never prescribing add powers of 4 D or greater for patients with visual acuity of 20/25 to 20/70 was significantly associated with seeing fewer patients with mild visual loss in a typical 2-month period (i.e., less than six) and fewer years in optometric practice, as per data shown in Table 2. Fig. 1 illustrates the number of years in optometric practice according to whether the respondents typically or never prescribe add powers of 4 D or greater for patients with visual acuity of 20/25 to 20/40 or visual acuity of 20/50 to 20/70.

Among optometrists who do not practice some low vision rehabilitation, 52% indicated that they never refer patients with visual acuity of 20/25 to 20/40 for low vision rehabilitation, and women practitioners were 2.9 times more likely to never refer these patients (P=.003) (i.e., 60.4% of women practitioners never refer, 34.6% of male practitioners never refer). The mean reported level of visual acuity loss for which optometrists who do not practice low vision rehabilitation will tend to refer was 0.57 logMAR or 20/74 (standard deviation, 0.2; range, 0.2 to 1.4 logMAR). Of the respondents who do not practice some low vision rehabilitation,

18.7% indicated that they never refer for low vision rehabilitation for visual acuity of 20/50 to 20/70, which was not significantly associated with sex, years in practice, patient volume, number of patients typically seen with mild vision loss, or having recently attended a continuing education lecture on low vision rehabilitation.

Table 1 demonstrates that a sizable proportion of those who do not practice low vision rehabilitation never prescribe any low vision rehabilitation interventions or management strategies (i.e., add powers of ≥ 4 D, low vision devices [magnifiers], or referral for low vision rehabilitation) for mild visual loss. For patients with visual acuity of 20/25 to 20/40, optometrists who did not practice low vision rehabilitation and had fewer years in practice were significantly more likely to never prescribe any low vision rehabilitation interventions or management strategies, as shown in Fig. 2 and Table 2. Having attended a continuing education program on low vision rehabilitation in the past 2 years was not significantly related to the low vision rehabilitation practice patterns for mild visual loss that were examined in Table 2.

Identified Barriers

Fig. 3 displays the commonly reported barriers to providing low vision rehabilitation services. The most commonly reported barriers were "patient cost of the low vision exam and/or devices" and "patients are not interested or would not go to a low vision exam," which were indicated by 54 to 55% of respondents. Other common barriers were lack of equipment, specifically that "it is not feasible to stock magnifiers in office" (29%), "lack of a local low vision provider" (28%), "uncertain benefit from low vision services" (17%),

TABLE 2. Multiple logistic regression analyses for relationships between practice patterns for LVR and optometrists' characteristics for those who do not practice LVR

For VA 20/25–20/40 Optometrist characteristics	Never Rx ≥4 add	Never refer for LVR	No LVR or referral
Female sex	OR, 1.02	OR, 2.70	OR, 1.42
	(95% CI, 0.43–2.42; <i>P</i> = .97)	(95% CI, 1.21–6.04; <i>P</i> = .02)*	(95% CI, 0.59–3.40; <i>P</i> = .44)
No. years in practice	OR, 0.96	OR, 0.98	OR, 0.96
	(95% CI, 0.92–0.995; <i>P</i> = .03)*	(95% CI, 0.95–1.02; <i>P</i> = .28)	(95% CI, 0.93–0.999; <i>P</i> = .04)*
Patient volume	OR, 1.07	OR, 0.997	OR, 1.02
	(95% CI, 0.997–1.15; <i>P</i> = .06)	(95% CI, 0.94–1.06; <i>P</i> = .92)	(95% CI, 0.96–1.09; <i>P</i> = .48)
<6 Mild VA loss patients	OR, 5.36	OR, 0.69	OR, 1.59
	(95% CI, 2.18–13.2; <i>P</i> < .001)*	(95% CI, 0.33–1.45; <i>P</i> = .33)	(95% CI, 0.72–3.52; <i>P</i> = .25)
LV CE within 2 y	OR, 1.12	OR, 1.02	OR, 2.23
	(95% CI, 0.45–2.77; <i>P</i> = .81)	(95% CI, 0.47–2.20; <i>P</i> = .96)	(95% CI, 0.98–5.08; <i>P</i> = .06)
For VA 20/50–20/70 Optometrist characteristics	Never Rx ≥4 add	Never refer for LVR	No LVR or referral
Female sex	OR, 0.67	OR, 2.64	OR, 1.75
	(95% CI, 0.29–1.56; <i>P</i> = .35)	(95% CI, 0.78–8.90; <i>P</i> = .12)	(95% CI, 0.34–9.09; <i>P</i> = .51)
No. years in practice	OR, 0.95	OR, 0.98	OR, 0.92
	(95% CI, 0.92–0.99; <i>P</i> = .01)*	(95% CI, 0.94–1.03; <i>P</i> = .42)	(95% CI, 0.85–1.003; <i>P</i> = .06)
Patient volume	OR, 1.07	OR, 0.94	OR, 0.99
	(95% CI, 0.9997–1.13; <i>P</i> = .05)	(95% CI, 0.86–1.03; <i>P</i> = .17)	(95% CI, 0.90–1.10; <i>P</i> = .90)
<6 Mild VA loss patients	OR, 3.09	OR, 1.17	OR, 1.54
	(95% CI, 1.41–6.74; <i>P</i> = .005)*	(95% CI, 0.48–2.88; <i>P</i> = .73)	(95% CI, 0.47–5.05; <i>P</i> = .48)
LV CE within 2 y	OR, 0.69	OR, 0.86	OR, 1.08
	(95% CI, 0.30–1.58; <i>P</i> = .38)	(95% CI, 0.32–2.32; <i>P</i> = .76)	(95% CI, 0.30–3.87; <i>P</i> = .91)

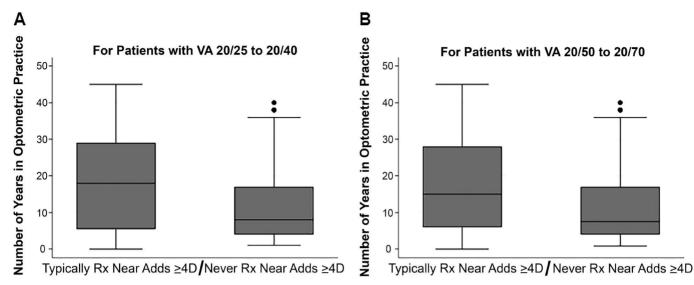


FIGURE 1. Box plots of the number of years in optometric practice according to whether the respondents who do not practice low vision rehabilitation typically or never prescribe add powers of 4 D or greater for patients with visual acuity (VA) of 20/25 to 20/40 or VA of 20/50 to 20/70. In the box plot, the bottom and top of the box reflect the 25th and 75th percentile (i.e., the upper and lower quartiles, respectively), and the band near the middle of the box is the 50th percentile (i.e., the median). The ends of the whiskers represent the lowest datum within 1.5 times the interquartile range of the lower quartile and the highest datum still within 1.5 times the interquartile range of the upper quartile.

"lack of proficiency with high adds" (13%), "lack of time" (13%), and a "burdensome referral process" (9%).

Practitioners who saw greater numbers of patients with mild vision impairment were significantly more likely to indicate lack of patient interest in going to a low vision examination (odds ratio, 1.27; P = .03) and significantly less likely to report that is it not feasible to stock magnifiers in office (odds ratio, 0.77; P = .03), after adjusting for whether they practice low vision

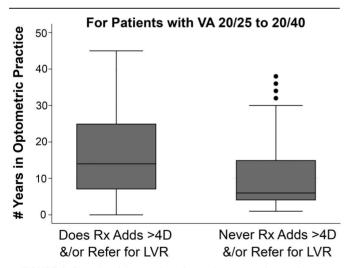
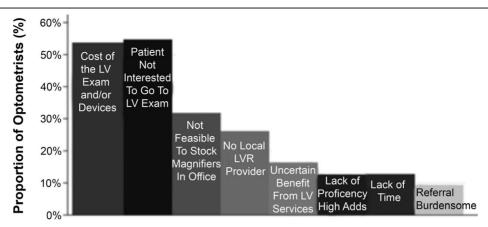


FIGURE 2. Box plot of the number of years in optometric practice according to whether the respondents who do not practice low vision rehabilitation typically or never prescribe any low vision rehabilitation interventions or management strategies (i.e., add powers of $\geq 4\,$ D, low vision devices [magnifiers], or referral for low vision rehabilitation) for patients with visual acuity (VA) of 20/25 to 20/40.

rehabilitation. Among those who do not practice low vision rehabilitation, there was a significantly greater odds of reporting that it was uncertain if the patient would benefit from low vision services among male practitioners (odds ratio, 3.1; P = .02) or those who indicated greater visual acuity loss as a criterion for low vision referral (odds ratio, 1.28 for every 0.1 log unit increase; P = .03), as shown in Fig. 4. The odds of reporting lack of time as a barrier was significantly related to increased patient volume per day (odds ratio, 1.09; P = .02). The other common barriers were not statistically significantly related to number of years in practice, patient volume, having taken a continuing education course on low vision in the past 2 years, or sex (all P > .05). Among those who do not practice low vision rehabilitation, there were no significant differences in the top barriers reported by those who had not completed a residency compared with those who were residency trained (all P > .05).

DISCUSSION

The current study revealed that, among optometrists who are not low vision rehabilitation practitioners, there is a significantly greater tendency for newer graduates within the past 5 to 10 years to never prescribe high adds of 4D or greater and/or to fail to make low vision rehabilitation referrals for patients with mild vision loss. This study identified several potentially modifiable barriers that could be reduced through practitioner education programs to target their concerns related to the provision of low vision rehabilitation services. Interestingly, attendance at a low vision continuing education program in the last 2 years was unrelated to lack of low vision rehabilitation management of mild vision loss, indicating that existing courses are not targeting the concerns identified in the current survey. Therefore, new courses will need to be developed with the specific intention of changing practice patterns for



Barriers to Low Vision Rehabilitation (LVR) Services

FIGURE 3. Bar graph showing the proportion of respondents who indicated each barrier to low vision rehabilitation services.

the low vision rehabilitation management of mild vision loss. There may also be value in incorporating the concepts of basic low vision care for mild visual loss into general continuing education lectures as a part of the continuum of care for patients with ocular disease. Also further efforts should be pursued by national organizations, such as the American Academy of Optometry and American Optometric Association, to educate their members on the management of mild visual loss. It should be feasible for practitioners to incorporate basic low vision interventions into primary eye care practice, such as prescribing high adds and referring for low vision rehabilitation services. The findings of this study suggest a need to develop new interventions to help overcome the perceived barriers and change practice patterns for the management of mild vision loss.

The findings of the current study could be used to create new continuing education lectures and/or enhance existing programs that are being implemented in the United States for optometrists and ophthalmologists to receive additional training to provide low vision rehabilitation and diagnostic low vision aids to use in their

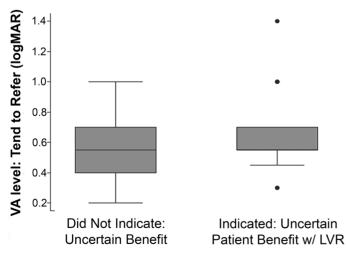


FIGURE 4. Box plot of the level of visual acuity (VA) loss at which optometrists tended to refer for low vision rehabilitation according to whether they indicated that it was uncertain if the patient would benefit from low vision rehabilitation (P = .03).

offices. New lectures and workshops could be developed specifically to overcome some practitioners' "lack of proficiency with high adds" consistent with the findings that this is an effective management strategy. 11 It will be important for such programs to emphasize that high adds are not always effective for every case of low vision, such as patients with macular sparing or more advanced vision loss, in which case a referral would be indicated to a low vision rehabilitation provider who can evaluate electronic magnification aids or demonstrate nonvisual approaches. Practitioners who indicated "cost of the low vision devices" as a barrier may not realize that the near-reading needs of many mild vision loss patients may be addressable with glasses with high adds of 3 D or greater or that there are high-quality, handheld, illuminated optical magnifiers for less than U.S. \$50 to 100. These types of devices and add powers can be effective even with basic low vision services, and they do not require comprehensive low vision rehabilitation/extensive training. 11 To address the concern that "it is not feasible to stock magnifiers in office," there is an option to use an online, Internet-based store to order multiple brands and types of products with direct shipping to patients, in which case the practitioner would use a small kit of demo devices to determine their efficacy in office and make recommendations but not have the requirement to maintain a full stock of low vision aids.

The findings of the current study could also be used to help improve low vision rehabilitation referral rates for mild vision loss. For practitioners who indicated a "lack of local providers," there appears to be a need to develop a user-friendly resource to identify current low vision rehabilitation providers nationwide or train them to become low vision rehabilitation providers for mild vision loss. For the providers who indicated "lack of time" and/or "burdensome referral process" as barriers, there exists a need to develop resourceefficient means for them to make referrals. For example, support staff could be trained to become involved with the process to facilitate the patient referrals to low vision rehabilitation by providing the patients with information. Another system currently being developed involves an electronic health record, Best Practice Advisory, to notify physicians of patients whose visual acuity or diagnosis indicates that they are a candidate for low vision rehabilitation services (Goldstein et al. IOVS 2019;60:ARVO E-Abstract 4045). 16 It would be important for any new programs to conduct future surveys to evaluate their efficacy to change the perception of barriers.

Recent findings from clinical trials support that significant improvements in visual ability are measurable after basic low vision rehabilitation for visual acuity of 20/50 to 20/63. 11 Nevertheless, there were some optometrists who believe that there is an "uncertain benefit from low vision services." This opinion tended to be reported by males who indicated greater visual acuity loss as a criterion for low vision referral. It is unclear whether these practitioners are aware of the latest research on low vision rehabilitation, which could be targeted as part of educational efforts. On average, the level of visual acuity loss at which providers tend to refer for low vision rehabilitation was around 20/70, indicating that there exists a notion that patients with mild vision loss do not require or are not eligible for low vision rehabilitation. Educational efforts should also work toward eliminating the definition of low vision as 20/70 or worse and emphasize that patients with any level of visual acuity loss should be referred if they are experiencing visual functional deficits because low vision rehabilitation can be reimbursed at any level of visual acuity. For example, older patients with contrast sensitivity loss who have normal visual acuity may have difficulty with reading the newspaper and might benefit from low magnification and/or task lighting; optometrists who do not provide these options should refer these patients for low vision rehabilitation. In addition, providers can educate their patients about low vision services to help create awareness for if/when the vision worsens.

In addition to targeting the perceived barriers identified in the current study, our results also highlight the need to target specific optometrists, that is, more recent graduates (i.e., within the past 5 to 10 years) for educational programs on prescribing high adds of 4 D or greater or recommending any low vision rehabilitation management (i.e., magnifiers or referral) for mild vision loss. In addition, faculty educators at schools or colleges of optometry should work to increase students' skill set for prescribing high add powers of 4 D or greater and their awareness of this management option for mild vision loss. Although it is unclear why recent graduates tend to be less likely to manage mild vision loss with high reading adds, this concern could be remedied by increased emphasis on this aspect during optometry school in course lectures, laboratories, and primary care clinics. The Association of Schools and Colleges of Optometry developed core competencies in low vision in 2009 to attempt to achieve this goal. However, the results of our survey from new graduates indicate that competencies with regard to clinical encounters for the management of functional deficits due to mild visual loss in both the primary care clinic and vision rehabilitation services may need to be considered to ensure that all new optometrists can integrate their primary low vision knowledge into their practice.

Further work is needed to gain a better understanding of why optometrists indicated that "patients are not interested or would not go to a low vision exam." Perhaps they are concerned about the stigma associated with the term *low vision* or use of magnifier

devices, or perhaps this barrier could include some of the other barriers, such as "cost of the low vision exam and/or devices" or "lack of a local low vision provider," although we did not find any significant correlations between these reported barriers. In this case, it is possible that the providers tended to select the barrier that encompassed these reasons why the patient would not pursue a low vision examination. Information was not collected about whether the optometrist discussed low vision rehabilitation with the patient or if the doctor did not discuss because it was assumed the patient was not interested. Past research has shown that clinicians were not able to successfully predict which of their patients would be successful with low vision rehabilitation. ¹⁶

It was not mandatory to complete the surveys that were administered for this study; thus, the responses may be prone to selection bias, although it is unknown which optometrists might have been less likely to complete the survey or whether noncompletion was completely at random or for reasons unrelated to the topic of the survey. A strength of the study was the administration of the survey to several audiences both online and in person at both regional and national meetings, which allows for better generalizability of the study results and reduces potential for biases due to practice location.

Another potential limitation of the study was that the survey focused on optical aids (i.e., magnifiers and lenses). The use of digital technology with built-in accessibility features and apps on smartphones, tablets, and/or computers can be helpful to assist with reading difficulty but was not explored as a management option for those with mild visual loss in the survey. Enlarged text and/or reversed contrast features on digital devices may be appropriate for mild visual loss because those patients are typically interested in visual reading rather than using auditory output, such as text-to-speech or optical character recognition software, which tends to be used by individuals with more severe visual loss. Magnifier apps on smartphones to read printed, hard-copy reading materials are more cost-effective than optical magnifiers, but they may be more difficult to use than optical magnifiers. Further surveys should address whether practitioners are recommending digital technology in their management of patients with vision impairment (mild and otherwise).

Barriers to the provision of low vision rehabilitation services are not unique to the United States, because this issue has been previously reported by investigators from other countries $^{6,9,13-15}$; therefore, it will be important to develop global collaborative efforts and interventional programs to address this issue. Additional studies are still needed to fully understand which low vision rehabilitation interventions (e.g., magnifiers or high add powers ≥ 4 D) are preferred by patients with mild vision loss and most effective to improve their near visual ability and reading. Future studies are also needed to develop interventions to change practice patterns and create awareness of the impact of basic low vision rehabilitation for patients with mild low vision.

ARTICLE INFORMATION

Supplemental Digital Content: The Appendix A, available at http://links.lww.com/OPX/A432, consists of the full survey that was administered during the data collection for this original investigation.

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Writing – Original Draft: AGM, TLC, AKB; Writing – Review & Editing: AGM, NCR, TLC, KP, AKB.

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