



Published in final edited form as:

AJO Int. 2025 October ; 2(3): . doi:10.1016/j.ajoint.2025.100144.

Perspectives on eye care access and telemedicine-based glaucoma screening among Latine individuals with limited English proficiency

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Abstract

Purpose: Michigan Screening and Intervention for Glaucoma and Eye Health through Telemedicine Program (MI-SIGHT) was developed to facilitate access to glaucoma and eye disease screening and improve attendance at recommended follow-up in underserved communities. MI-SIGHT offered free eye disease screenings, low-cost glasses and for those who screened positive for glaucoma, personalized education, and language-concordant coaching grounded in motivational interviewing. The primary aims of this study were 1) To explore barriers to eye care among Latine participants with limited English proficiency (LEP) who screened positive for glaucoma, 2) to understand whether and how the MI-SIGHT program facilitated access to care and 3) to understand participant experience in MI-SIGHT to inform the development of future interventions.

Design: Qualitative study.

Subjects: 21 participants who identified as Latine with low English proficiency (LEP) who screened positive for glaucoma during the MI-SIGHT program and received personalized health education about their screening results, motivational-interviewing based health coaching, and care navigation all in Spanish.

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Declaration of interests

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Paula Anne Newman-Casey, Maria A. Woodward, Amanda K. Bicket, Angela Elam report financial support was provided by Centers for Disease Control and Prevention. Angela Elam reports financial support was provided by National institute for Minority Health and Health Disparities. Paula Anne Newman-Casey and Maria A. Woodward report financial support was provided by Research to Prevent Blindness. Maria A. Woodward reports financial support was provided by the National Eye Institute. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Financial disclosures

No financial disclosures.

Methods: Participants were recruited from the two MI-SIGHT sites, a Federally Qualified Health Center (FQHC) and a free clinic. Semi-structured interviews were conducted in Spanish by a native Spanish speaker. Interviews were audio-recorded and transcribed verbatim in Spanish. Grounded theory was used to guide qualitative analysis. Thematic saturation was achieved after analyzing 16 interviews.

Main outcome measures: Themes regarding barriers to eye care access and facilitators to eye care access through MI-SIGHT.

Results: Between 7/11/23–12/19/23, 154 MI-SIGHT participants identified as Latine and had LEP, 22 screened positive for glaucoma and 21 agreed to be interviewed. Interviews revealed that the primary obstacles to accessing eye care among Latine participants with LEP were language barriers, financial constraints due to lack of insurance, insufficient social support, and difficulty with transportation. Additional challenges included immigration-related fears and complexities in healthcare system navigation. Participants identified key facilitators of the MI-SIGHT program as language concordance with providers, availability of interpreters, affordable eye care and glasses, and transportation services. Personalized coaching in their native language further enhanced their understanding of their eye disease and participation. High satisfaction was evident, with nearly all participants willing to recommend the program to others.

Conclusions: Eye care access for Latine participants with LEP is shaped by interconnected structural, socioeconomic, and cultural barriers. Language-concordant interventions, like the MI-SIGHT program, improve care engagement with unanimously positive feedback and willingness of participants to recommend the program. Integrated strategies targeting multiple barriers are critical for advancing eye health equity.

Keywords

Adherence; Glaucoma; Limited English proficiency; Health equity; Screening; Telemedicine

Approximately 93 million adults in the United States are at high risk for serious vision loss, yet only half have seen an eye doctor in the past year.¹ This gap in access to eye care is particularly concerning given the well-documented underutilization of services among marginalized groups, including Black and Latine communities.² Many forms of vision loss can be prevented or delayed through early detection—particularly in the case of glaucoma.³ Despite this, an estimated 2.4 million individuals in the U.S. remain undiagnosed or untreated for glaucoma, with 78 % of undiagnosed cases occurring among Black and Latine populations.⁴ As a chronic condition that requires costly specialized care, ongoing monitoring, and long-term follow-up, glaucoma disproportionately affects communities already facing significant barriers to care, deepening existing disparities in access and outcomes.^{4,5}

One critical and underexamined barrier contributing to these disparities is low English proficiency (LEP).^{6,7} According to the American Community Survey, about 8.2 % of the U.S. population has LEP, and two-thirds of them are Spanish speakers.^{8,9} Despite representing a growing and underserved segment of the population, Latine individuals with LEP remain underrepresented in eye health research. LEP is a well-documented barrier to equitable healthcare access and outcomes, compounding existing disparities related to

immigration status, income, and insurance coverage. A widespread lack of interpretation services—both during appointment scheduling and clinical encounters—further limits how individuals access, interpret, and act on medical information.¹⁰⁻¹² Centering the experiences of LEP Latine individuals is therefore essential to understanding the full range of access issues they encounter and to designing culturally and linguistically responsive interventions, such as the MI-SIGHT (Michigan Screening and Intervention for Glaucoma and Eye Health through Telemedicine) program evaluated in this study.

The MI-SIGHT program is an initiative aimed at addressing eye health inequities in underserved communities by operating an eye disease screening program at two trusted community health centers in Michigan, including a free clinic and a Federally Qualified Health Center.^{13,14} To facilitate access to costly specialized eyecare, MI-SIGHT implemented asynchronous teleophthalmology to provide free glaucoma and eye disease screening and affordable glasses. Participants who screened positive for pathology were provided with written educational material and care navigation to support access to recommended follow-up care. Participants who screened positive for glaucoma, identified as Latine, and had limited English proficiency (LEP) received a personalized health education intervention based on motivational interviewing, delivered in Spanish by a native Spanish speaker. The intervention aimed to improve engagement and follow-up care by using culturally responsive communication strategies. The impact of the language concordant intervention was subsequently evaluated through semi-structured interviews completed after the intervention.

This qualitative study was conducted within the MI-SIGHT cohort of Latine individuals with LEP who screened positive for glaucoma. Our study had three objectives: 1) to understand unique challenges in accessing eye care; 2) understand whether and how the MI-SIGHT program facilitated access to care, and 3) understand participant experience in the MI-SIGHT Program to inform the development of future interventions.

Methods

Study sites

The Michigan Screening and Intervention for Glaucoma and Eye Health (MI-SIGHT) Program is provided in partnership between the University of Michigan Kellogg Eye Center, and a free clinic in Ypsilanti, MI, and a federally qualified health center (FQHC), in Flint, MI. The free clinic serves about 5000 patients per year and the FQHC serves about 25,000 patients per year. The free clinic serves a population that is under-insured and uninsured, and the FQHC serves a population majority insured by Medicaid but also serves those without insurance by providing care on a sliding fee scale based on income.

Free screening, teleophthalmology and low-cost glasses

At the two community clinics, the ophthalmic technician conducted comprehensive ophthalmic testing and imaging. This included medical history, Snellen visual acuity (with current correction), autorefraction and subjective refraction (Marco ARK), and contrast sensitivity (Pelli-Robson chart). Eyeglass evaluation included interpupillary distance

(Essilor pupillometer). The ocular exam assessed pupillary response, anterior chamber angle (penlight), motility, alignment, and intraocular pressure (iCare tonometer). The ophthalmic technicians assisted patients in navigating a low-cost online glasses retailer (zennioptical.com), providing a tangible and immediate benefit that motivated individuals to participate in the glaucoma screening. Dilation was performed with 0.5 % tropicamide if the angle was open and IOP <30 mmHg. Imaging included fundus photography (disc, macula, superotemporal arcade) and RNFL OCT (Topcon). Data were entered into the electronic health record for the ophthalmologists at the University of Michigan for interpretation.¹³ Remote exam reviews were completed within a week of the visit to establish a diagnosis and assess the need for further testing. The ophthalmologist designated the follow-up interval and type of care, and the technician scheduled an appointment to review the plan with the participant. Diagnostic criteria and emergency management protocols have been previously described in detail elsewhere.¹³

Coaching background and motivational interviewing

A single ophthalmic technician, who was a native Spanish speaker and certified interpreter (MS-Z), was trained in glaucoma-specific motivational interviewing¹⁵ and delivered the coaching intervention and went over an educational program in Spanish (seeglaucoma.org). Visits were structured so the technician reviewed test results, explained the risk of developing glaucoma with aging, explained what glaucoma can do to vision if left untreated, discussed barriers patients may have to going to see a specialist, and then brainstormed solutions with the participant to address these barriers. The technician also served as a care navigator. This included connecting them with social workers or community health workers for insurance support, arranging transportation, providing interpreter services, and assisting with scheduling specialist appointments. This ophthalmic technician (MS-Z) worked previously as a community health worker in this Latine community.

Due to the cultural and linguistic demands of motivational interviewing—particularly the need for the interviewer to speak fluently and navigate communication styles common in Latine communities—the intervention was not offered to LEP participants who spoke languages other than Spanish.

Study population and interview process

Between July 11, 2023, and December 19, 2023, 154 native Spanish speaking participants expressed a preference to have an interpreter and were therefore classified as having limited English proficiency (LEP). These participants were enrolled in the MI-SIGHT program through either the free clinic ($n = 62$, 40 %) or the FQHC ($n = 92$, 60 %). Among them, 22 screened positive for glaucoma, and 21 participants consented to participate in semi-structured interviews following completion of the MI-SIGHT program. Interviews were conducted in person by the same native Spanish speaker (MS-Z), using an interview guide (Appendix A) that explored past barriers to accessing eye care and potential facilitators through the MI-SIGHT program. Participants were provided a \$20 gift card incentive to participate in the interviews.

Qualitative analysis

All interviews were transcribed verbatim and coded by two researchers using the principles of Grounded Theory, an inductive approach to extract themes.¹⁶ Researchers followed the stepwise approach of Grounded Theory: 1) familiarization, 2) open coding, 3) axial coding, 4) focused coding, and 5) theory building. Following the completion of all interviews, coders (JL, MSZ) read through all transcripts to familiarize themselves with the content. The two coders then created notes to describe participant experiences through open coding. Notes were then discussed among the group and recurring patterns were discussed and made into categories during axial coding. A code book was then generated as a team with definitions generated through consensus for each code. Then, working separately, the coders (JL, MSZ), used the codebook to code five transcripts. A third party (PANC) was brought in to help resolve inconsistencies between the coders when a consensus could not be reached. Once >80 % agreement was achieved on >95 % of the codes, the two coders re-analyzed and coded the remaining transcripts.¹⁷ Inter-rater reliability (IRR) was utilized to compare the two coders. Ranges for interpreting the kappa value of IRR were poor <0.4, fair to good 0.4–0.75, excellent >0.75. The total number of times a given code was expressed and the number of patients who commented on them was tallied. The qualitative analysis was coded using Dedoose 8.3.17 (Los Angeles, CA).

Qualitative quotation presentation

All participant quotations were provided in both English and Spanish (Supplemental Table 1), the participants' original language, to enhance cross-cultural understanding of our research findings.¹⁸ Two native Spanish speakers, MSZ from Mexico and NEDR from Peru, who bring lived fluency in Latin American linguistic nuances, translated the quotes. These translations were then reviewed for accuracy by bilingual native English speakers, PANC and JL, to ensure the precision of the English translation.

Ethical statement

This study was approved by the University of Michigan Institutional Review Board (IRB) and was conducted in accordance with the principles of the Declaration of Helsinki and the United States Health Insurance Portability and Accountability Act (HIPAA).

Results

In this study, 21 participants were interviewed, with 14 from the FQHC and 7 from the free clinic. The average interview duration was 9 min, ranging from 3 to 16 min. Thematic saturation was achieved after 16 interviews, beyond which no new themes emerged. The kappa value for the IRR between the two coders was 0.79. The participants included 11 females and 10 males, with a median age of 52 years (± 15). The participants represented a diverse group: 43 % were from Cuba ($n = 9$), 24 % from Mexico ($n = 5$), 10 % from Honduras ($n = 2$), and 5 % each from Dominican Republic, Brazil, Colombia, Venezuela, and Guatemala ($n = 1$ per country).

The primary barriers identified to accessing eye care were healthcare costs, immigration status, lack of health insurance, language barriers, transportation issues, and unfamiliarity

with healthcare navigation (Fig. 1a). Participants made 166 comments regarding barriers; language difficulties, healthcare costs, and lack of knowledge about community resources were the most prominent themes, collectively accounting for approximately 73 % of all barrier-related comments. Conversely, the main facilitators of accessing eye care through the MI-SIGHT program included affordability, availability of interpreters, health promotion, racial/ethnic/language concordance, and transportation support (Fig. 1b). Facilitators to accessing care through MI-SIGHT were discussed 137 times, with racial and ethnic concordance, access to interpreters, and health system navigation highlighted most frequently, comprising about 81 % of facilitator-related comments. Table 1 provides additional quotes exemplifying these themes.

Barriers to healthcare access

Barriers among Hispanic participants with limited English proficiency (LEP) rarely existed in isolation. Participants frequently described how language challenges were intertwined with socioeconomic, ethnic, cultural, and systemic obstacles. Many reported difficulties navigating the healthcare system due to limited English proficiency and the lack of interpreter services, which led to poor communication with providers and reduced access to health education. Others expressed fear of seeking care due to undocumented status, un-expected healthcare costs (e.g., medications, appointments, emergency visits), and unfamiliarity with the U.S. healthcare system compared to the public models in their home countries. These overlapping challenges significantly influenced participants' willingness and ability to pursue follow-up care. To better reflect this complexity, the intersecting themes were organized into three broader categories: (1) linguistic and cultural barriers, (2) socioeconomic barriers, and (3) systemic and structural barriers. Each is described in detail in the sections that follow.

Linguistic and cultural challenges

Language Barriers: The inability to speak or understand English was mentioned 65 times by 18 participants. Participants faced challenges ranging from filling out paperwork and scheduling appointments, to the unavailability of interpreters during medical visits, often resulting in frustration and avoidance of care. Fear of being misunderstood compounded these difficulties, and assumptions about their language proficiency further hindered communication. As one participant described: *"I've had difficulties with interpreters. Sometimes they tell me... because I speak [some] English, I don't need an interpreter. But I feel like I do because I often have many doubts."* Even participants proficient in conversational English admitted struggling to convey complex health issues.

Socioeconomic barriers

Economic challenges and health prioritization: The high cost of healthcare was cited as a barrier 27 times by 10 participants. Participants struggled to prioritize healthcare due to financial burdens, including managing dependents, expenses from recent hospitalizations, and juggling multiple medical conditions. One participant shared their community's challenges: *"For many people, setting aside part of their income to pay for*

health insurance is unrealistic. They almost live only for food, rent and transportation,” underscoring how economic constraints often lead to delayed medical care.

Lack of social support and reliable transportation was cited 17 times by 8 participants as a significant barrier to accessing healthcare. Many participants lacked family or a support network, with some citing the absence of someone to accompany them as a barrier. This isolation was often compounded by an inability to drive, limiting independence. As one participant with an hour-long commute noted, *“Transportation is another barrier [on top of communication] that limits one’s ability to do activities because the distances are long, and it’s not easy to attend appointments.”*

Lack of health insurance was cited 19 times by 8 participants as a critical barrier. Participants without insurance faced significant barriers to accessing care, citing fear of debt and limitations of state-funded plans like those that *“only cover emergencies.”* Some were unable to qualify for insurance, leaving them reliant on emergency services, as one participant stated, *“Because here, without insurance, they don’t do anything.”* This underscores how lack of coverage may delay care and worsen health outcomes.

Systemic and structural barriers

A **lack of awareness of available healthcare resources** was mentioned 24 times by 9 participants. Participants mentioned that they needed additional information to access the services *“You often hear that the clinic is doing eye exams, but you need more information —phone number, address, and things like that.”* This unawareness, often attributed to the complexity and **unfamiliarity of the healthcare system**, was mentioned seven times by four participants. Prior experiences shaped participants’ perceptions of care access. One participant, turned away for lacking an ID, shared, *‘If one doesn’t have [U.S. residence] ID...they don’t assist you,’* highlighting unawareness of resources like free clinics or community health centers that may not require identification. Another participant emphasized the importance of self-advocacy, stating, *“but you have to ask... and then they give us the information and tell us that there’s a system for people who don’t have social security, for undocumented people, where they can help us for free.”* This emphasizes the need for healthcare navigators to guide patients through the system and ensure they are aware of potential resources.

Immigration status was mentioned 7 times only by two participants as a barrier. Two participants expressed fears and challenges related to their immigration status, leading to reluctance to access services. One participant described being denied care due to a lack of proper identification, while another expressed fear of repercussions from attending medical appointments.: *“That [personal] information can be used to speed up the deportation process. I think that there are many people who deprive themselves of receiving assistance. Because... They don’t want them [U.S government] to realize that they are here.”* These fears and legal barriers can significantly hinder any access to medical services.

Emotional response to barriers

Emotional expressions emerged consistently during analysis and were closely tied to participants' descriptions of barriers. We defined '**emotional response to barriers**' as any sentiment participants expressed toward the challenges they faced, which emerged 17 times by 8 participants. Many expressed feelings of frustration, fear, and helplessness. One participant shared their sense of helplessness, saying: "It is my incompetence that bothers me. The fact that I don't learn [the language] quickly." Others expressed hesitancy: "It [limited English proficiency] kind of holds you back a little. Many times, I've stopped going to places for that very reason—because when I get there, they don't understand me, I don't speak, and I have to find someone to explain things to me." Participants also expressed frustration with the absence of interpreters: "Going to an appointment and not understanding, that's frustrating." Another participant expressed fear about seeking treatment: "Because you're afraid, you don't seek treatment; you're afraid of not knowing how to get information [in English]." These emotional reactions highlight the compounded difficulties LEP Spanish-speaking participants face, underscoring the need for more comprehensive support.

Facilitators suggested by participants

Addressing linguistic and cultural barriers

Racial/Ethnic/Language Concordance and Access to an Interpreter: Mentioned 52 times ($n = 16$), participants emphasized the comfort and ease of communication when interacting with providers who shared their language or cultural background. One participant contrasting their experience with English speaking providers: *"It's not the same, when I talk to you [the Spanish speaking coach], we discuss things differently. And I take more interest in doing things as well. I finally understand that what's wrong with my vision doesn't get cured [it's chronic], and it could lead to bigger problems. There's nothing like being understood... if they assign me an American doctor [who only speaks English], my peace of mind would be gone."* Participants having **access to an interpreter** was mentioned 32 times by 15 participants, emphasizing the crucial role of interpretation in facilitating medical appointments, whether provided by a friend, family member, or medical staff. Some participants utilized available community resources. One participant, for example, explained how the Latine community center facilitated their healthcare experience by providing access to a phone translator: *"I've had to go to the Latine center on occasion to make an appointment, and I've used the phone translator [Latine center provided]."*

Addressing socioeconomic barriers

Reduced cost of care was mentioned as a solution 10 times by 5 participants who expressed appreciation for the affordability of the SIGHT program. Although not everything was free, this participant felt it was accessible saying, *"It [participating in MI-SIGHT] is not 'free' as people say here, but at least the expenses are low, because one concern is to have money available for healthcare."* Trying to mitigate the costs of other health issues, some participants shared turning to alternative medicine when they could not afford prescribed treatments.

Addressing systemic and structural barriers

Social support and Transportation, including assistance with navigating the healthcare system and transportation to medical appointments, was mentioned 12 times by 7 participants. The participants noted the importance of having either a friend or family member to assist in navigating medical appointments and the health care system. Participants explained how their family could offer a solution to their transportation barrier to their medical appointments, one saying, *"there are alternatives to find a solution to the [transportation] problem, one can be my son, when he is available, and other is with Medicaid."* Some participants who had transportation still expressed gratitude for having a healthcare facility near their home. Having a clinic within **walking distance** was mentioned 4 times by 3 participants as a solution to their transportation challenges. One participant noted, *"Yes, I was near a clinic"* in response to a discussion with the interviewer regarding walking to the clinic when she is unable to receive a ride. Previously, the participant would miss medical appointments due to lack of transportation.

We defined **health promotion/ health system navigation** as a participant having access to a Spanish speaking community center that provided information about available resources. This code was suggested 27 times by 9 participants. Those who lived near the FQHC highlighted the benefit of having a local community center, *"We have a center where we go, where Latinos who speak the same language, called Latinx and they gave us the information."* This response came when the interviewer asked what helped them hear about the SIGHT program within the community.

Impact of MI-SIGHT interventions

In addition to identifying barriers and facilitators to care, we also explored participants' experiences with the MI-SIGHT program to inform the design of future interventions. Themes that emerged included motivations for joining the program, satisfaction with services received, willingness to recommend the program, and participant feedback or suggestions for improvement.

Motivation to join MI-SIGHT program

The 21 participants collectively discussed their motivations to join the MI-SIGHT program a total of 37 times during the interviews. The most common reasons for joining included concerns with their vision (mentioned 19 times), recommendations to utilize the program from family or friends (14 times), and accessible eye care services—such as affordable glasses and free screenings—that were previously unavailable to them (4 times). When asked about their personal reasons for joining, one participant highlighted the program's affordability, stating, *"Yes, because if you go to have an exam somewhere else, it's very expensive, and sometimes there are no resources to go; that's another problem too."* Another participant explained how referrals from friends influenced their decision: *"Well, when some friends mentioned it. And that's why we attended this program."* Others expressed the importance of maintaining eye health for their work: *"That is something I do every year... I have presbyopia and farsightedness. My job makes my lenses wear out quickly, so I need my eyes to be in perfect health to keep working."* Another participant shared their eagerness

to seize the opportunity, *"I had never had that option before [of eye disease screening and low-cost glasses], and when I saw it, I said, 'Well, I'll go and see what happens.'"*

Satisfaction with MI-SIGHT program

Participant satisfaction with the SIGHT program was mentioned **59 times** by participants ($n = 21$). They appreciated the thorough eye exams, friendly staff, and personalized care from both doctors and the glaucoma counselors. Language and ethnic concordance also played a significant role in their positive experience. One participant expressed gratitude for how the program accommodated those with limited English proficiency (LEP). Others valued the clarity and simplicity of the information shared, *"It [the SIGHT program] will help others understand because they explain things in a very simple and practical way, without using medical jargon."* Several participants also appreciated the compassionate care they received, with one stating, *"For me, [SIGHT] was excellent... every piece of information was very important. Before each exam, they explained what they were going to do and asked if it was ok."* Another participant highlighted how the program improved access by making glasses financially attainable and simplifying the process of obtaining them, *"I really liked that...the cost of the glasses was very affordable, and that we could get the results [of the screening] immediately [when we picked up the glasses]. Everything was very easy and accessible."*

This environment of trust and personalized care enhanced the absorption of knowledge, with at least 14 participants mentioning their **improved comprehension of glaucoma** as a disease, cited 22 times. One participant shared, *"[The personalized education] was very good because I knew a little about glaucoma, but it was very vague, only that it was hereditary, but nothing more."* Participants also noted how the glaucoma education session promoted a better understanding of the disease and overall importance of eye health. One participant stated, *"Sometimes other priorities exist, but one may not be aware of them. Now, knowing more about this [glaucoma], I also see it as a priority."*

Recommending the MI-SIGHT program to others

Participants were asked "Have you recommended this program to a friend or family member? Why or why not?" The majority confirmed that they had recommended the MI-SIGHT program to family or friends, mentioning it 41 times ($n = 19$). One participant, for example, recommended the program to a family member whose vision was deteriorating, saying, *"I suggested they come here [MI-SIGHT], that they could help here."* Another participant expressed gratitude to the person who referred her and her coworker to the program: *"I am grateful to the person who recommended me and my coworker. She made the appointment for me."* One participant emphasized the significance of visual health, stating, *"I recommend everyone I know because I understand how important visual health is and how it impacts quality of life."*

Program feedback

Feedback on improving and promoting the program was mentioned 26 times ($n = 14$). Participants suggested using social media, advertising at local community centers, and sharing personal experiences to spread awareness. One participant recommended, *"It would*

be good to have someone in the Latine centers giving talks and creating more publicity." Another participant highlighted word-of-mouth promotion, *"My friend told me, and I told someone else, and it continues like that."* One participant who attended the free clinic and had over an hour commute lamented on the lack of nearby facilities, stating *"[We need], more programs closer to Detroit because there are many people who need help."*

Discussion

Our study highlights the voices of Latine individuals with LEP, offering insights into the healthcare barriers they face, particularly in accessing eye health services. Our qualitative analysis identified key barriers: linguistic and cultural challenges, socioeconomic constraints, systemic issues (like healthcare navigation difficulties and limited insurance), and limited social support. Participants also noted facilitators—language and ethnic concordance, interpreter availability, affordable eye care and transportation assistance—and shared positive feedback on the MI-SIGHT program for providing these facilitators to accessing eye care. Participants pointed out the importance of a Latine community center in its ability to provide interpreter services and health care navigation services. By detailing these barriers and facilitators, our findings provide actionable insights to guide practice and policy changes that can improve access to eye care for people from LEP Latine communities.

Cultural and linguistic barriers were the most significant obstacles for Spanish-speaking participants, aligning with existing research that highlights language discordance as a key healthcare barrier.¹⁹⁻²² Title VI of the Civil Rights Act mandates access to trained interpreters, and the Affordable Care Act (ACA) reinforced this through Section 1557, requiring federally funded healthcare providers and insurers to provide qualified interpreters.²³ This includes stricter training standards and prohibits the use of bilingual minors, family members, friends, or un-trained staff, except in emergencies or at the patient's request. Despite this, our participants frequently relied on family or friends for interpretation, a practice known to carry risks such as inaccuracies, lack of neutrality, and breaches of confidentiality.^{24,25} Our participants did not express concerns about using family and friends for interpretation; they viewed it as a facilitator for better care. This preference for family and friends may reflect a sense of familiarity and trust. However, this reliance may also reflect systemic biases that discourage or block access to interpreter services. Participants emphasized the need for these services and greater support for LEP individuals, highlighting provider-patient language and racial/ethnic concordance, as well as interpreter availability, as key to improving healthcare experiences. These findings emphasize the need for greater cultural sensitivity in healthcare settings,²⁶ including early training in working with interpreters.^{27,28} However, limited Medicaid and Medicare reimbursement for interpreter services places a financial burden on providers.²⁹ Expanding federal and state reimbursement for interpreter services remains crucial to closing this gap and ensuring equitable access to care.

Escobedo et al. highlight that Latine individuals with stronger English proficiency are more likely to be insured, underscoring the connection between language skills and healthcare access.²¹ In our study, socioeconomic barriers—such as high healthcare costs, lack of

insurance, and limited social support—were major obstacles for the LEP Latine community. Many participants prioritized immediate financial needs over essential eye care, often resulting in untreated conditions and illustrating the impact of these challenges on health outcomes.^{21,30} Uninsured or underinsured participants reported accumulating debt from emergency surgeries, while others, unable to qualify for insurance, felt alienated from seeking regular healthcare. Chronic conditions like glaucoma, which often initially progress without symptoms, are unlikely to be detected in the absence of preventive care.^{31,32} Given the high rates of visual impairment among Latine populations,³³ accessible eye care will be critical to improving eye health outcomes. For some participants, the local FQHC was the sole source of eye care; however, as of 2021, 68 % of FQHCs lack eye services.³⁴ Expanding eye care coverage within these centers could prevent vulnerable populations from being excluded from essential services. Limited social networks further exacerbated barriers for participants who needed family for interpretation or transportation due to lack of a car or driver's license. MI-SIGHT alleviated these barriers by providing free screenings, affordable glasses, and transportation support, minimizing financial burdens and reducing the need to rely on social networks to attend appointments.

Systemic challenges—such as unawareness of healthcare resources, complexity in navigating the U.S. healthcare system, and immigration status—posed significant obstacles for LEP (Limited English Proficiency) Latine participants.³⁵ Many, accustomed to different healthcare systems in their home countries, found U.S. healthcare difficult to navigate. Immigration status further compounded these barriers, as undocumented individuals feared legal repercussions when seeking care—a concern linked by Pelayo et al. to reduced adherence to diabetic eye disease screening in Latine communities.³⁶ Despite protections like the Biden Public Charge Rule, designed to promote access to public benefits for immigrant communities, persistent fears driven by unfamiliarity with changing policies continue to deter care even for those legally protected.^{37,38} The Latinx Community Center in Genesee County emerged as a crucial facilitator, consistent with literature highlighting the role of community centers in improving access to healthcare.³⁹ The center consolidated and presented available resources, equipping participants with confidence and knowledge about where to seek help. By guiding participants through the healthcare system and offering a trusted place for assistance, the center played a pivotal role. MI-SIGHT's partnership with this center fostered a safe, supportive environment, particularly valuable for those wary due to immigration concerns. This collaboration not only encouraged participants to recommend the program to others but also amplified its positive impact on the community.

Several potential limitations should be noted when interpreting the results of this study. First, the sample size was small, and the study population was comprised of middle-aged Latine Spanish-speaking individuals seeking care at community clinics and thus might not be generalizable to other populations. Second, the nature of this study was qualitative and might be impacted by social desirability or recall bias. Third, themes could have been missed in the coding process. Fortunately, we demonstrated a good inter-rater-reliability between the coders demonstrating consistency in the coding process.

Despite these limitations, our findings underscore significant barriers to ophthalmic care for Latine individuals with LEP and emphasize the need for targeted interventions to improve

access. The positive impact of a language-concordant coaching program and partnerships with local community health centers highlights effective strategies for reaching underserved communities. Further research is needed to evaluate the feasibility and scalability of interventions that expand access to care, deliver culturally sensitive services, and provide personalized coaching in patients' preferred language.

Precis

The MI-SIGHT program aimed to improve eye disease screening access for Latine individuals with limited English proficiency in underserved communities. It provided free screenings and culturally tailored, language-concordant education for those with glaucoma. This qualitative study identified language, cost, and transportation as major barriers to eyecare, which MI-SIGHT mitigated through language-concordant services, reduced costs, and partnerships with local health centers. This underscores the need for public health interventions that address interconnected barriers to eyecare.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Funding

This work was supported by the Centers for Disease Control and Prevention (Atlanta, GA; U01DP0064420100), National Institute for Minority Health and Health Disparities (Bethesda, MD; K23MD016430), and Research to Prevent Blindness (Physician Scientist Award, PANC, Career Advancement Award, MAW), the University of Michigan Clinical and Translational Science Award (UM1TR004404) and the National Eye Institute (5P30EY00700337). The funding organizations had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

Appendices

Appendix A

Spanish interview guide

1. ¿Cómo se enteró de este programa "SIGHT"?
2. ¿Cuál es su opinión de la sesión educativa, si es que tiene alguna?
 - ¿Tiene algún consejo en cómo podemos mejorar la sesión educativa?
3. ¿Cómo piensa que podríamos promover este programa con más gente que habla español?
4. ¿Qué barreras o dificultades ha tenido al acudir a una cita médica, para revisar sus ojos?
 - a. Algunas personas nos dicen que: el idioma, el costo de seguro médico transporte o cultural.
 - b. ¿Alguna otra dificultad que sepa de alguien en su comunidad haya tenido, para revisar sus ojos o su vista?

- c. ¿Qué servicio Médico está evitando o ha evitado en el pasado?
- 5. ¿Qué lo motivó a venir a revisarse la vista?
- 6. ¿Cómo fue su experiencia al venir a [Hope/Hamilton] para el examen de la vista con el programa SIGHT?
- 7. ¿Ha recomendado a algún amigo o familiar a este programa? ¿Por qué o por qué no?
- 8. Muchas gracias por participar en el programa SIGHT.

English interview guide

1. How did you find out about the “SIGHT” program?
2. What is your opinion of the educational session, if you have one?
 - Do you have any suggestions on how we could improve the educational session?
3. How do you think we could promote this program to more Spanish-speaking people?
4. What barriers or difficulties have you had when attending a medical appointment to check your eyes?
 - a. Some people have told us: language, cost of health insurance, transportation, or cultural reasons.
 - b. Are there any other difficulties that you or someone in your community have had when trying to get their eyes or vision checked?
 - c. What medical service are you avoiding or have avoided in the past?
*(This question was added as a probing question)
5. What motivated you to come get your vision checked?
6. How was your experience coming to [Hope/Hamilton] for the eye exam with the SIGHT program?
7. Have you recommended this program to a friend or family member? Why or why not?
8. Thank you very much for participating in the SIGHT program.

References

1. CDC. Fast facts: vision loss. Vision Eye Health; 2024. May 21, Accessed May 11, 2025 <https://www.cdc.gov/vision-health/data-research/vision-loss-facts/index.html>.
2. Elam AR, Tseng VL, Rodriguez TM, et al. Disparities in vision health and eye care. *Ophthalmology*. 2022;129(10):e89–e113. 10.1016/j.ophtha.2022.07.010. [PubMed: 36058735]
3. Kang JM, Tanna AP. Glaucoma. *Med Clin North Am*. 2021;105(3):493–510. 10.1016/j.mcna.2021.01.004. [PubMed: 33926643]

4. Varma R, Ying-Lai M, Francis BA, et al. Prevalence of open-angle glaucoma and ocular hypertension in Latinos. *Ophthalmology*. 2004;111(8):1439–1448. 10.1016/j.ophtha.2004.01.025. [PubMed: 15288969]
5. Quigley HA. The prevalence of glaucoma in a population-based study of Hispanic subjects: proyecto VER. *Arch Ophthalmol*. 2001;119(12):1819. 10.1001/archophth.119.12.1819. [PubMed: 11735794]
6. Twersky SE, Jefferson R, Garcia-Ortiz L, Williams E, Pina C. The impact of limited English proficiency on healthcare access and outcomes in the U.S.: a scoping review. *Healthcare*. 2024;12(3):364. 10.3390/healthcare12030364. [PubMed: 38338249]
7. Gill ZS, Marin AI, Caldwell AS, et al. Limited English proficiency is associated with diabetic retinopathy in patients presenting for cataract surgery. *Transl Vis Sci Technol*. 2023;12(10):4. 10.1167/tvst.12.10.4.
8. Projections of the size and composition of the U.S. Population: 2014 to 2060. Published online 2014.
9. Bureau U.C. New estimates highlight differences in growth between the U.S. Hispanic and non-Hispanic populations. [Census.gov](https://www.census.gov/newsroom/press-releases/2024/population-estimates-characteristics.html). Accessed 2024. <https://www.census.gov/newsroom/press-releases/2024/population-estimates-characteristics.html>.
10. Lee BW, Murakami Y, Duncan MT, et al. Patient-related and system-related barriers to Glaucoma follow-up in a county hospital population. *Investig Ophthalmology Vis Sci*. 2013;54(10):6542. 10.1167/iovs.13-12108.
11. Unzueta M, Globe D, Wu J, et al. Compliance with recommendations for follow-up care in Latinos: the Los Angeles Latino eye study. *Ethn Dis*. 2004;14(2):285–291. [PubMed: 15132216]
12. Ballouz D, Cho J, Woodward MA, et al. Facilitators and barriers to Glaucoma screening identified by key stakeholders in underserved communities: a community-engaged research approach. *J Glaucoma*. 2021;30(5):402–409. 10.1097/IJG.0000000000001756. [PubMed: 33273279]
13. Newman-Casey PA, Musch DC, Niziol LM, et al. Michigan screening and intervention for glaucoma and eye health through telemedicine (MI-SIGHT): baseline methodology for implementing and assessing a community-based program. *J Glaucoma*. 2021;30(5):380–387. 10.1097/IJG.0000000000001812. [PubMed: 33596017]
14. Newman-Casey PA, Niziol LM, Elam AR, et al. Michigan screening and intervention for glaucoma and eye health through telemedicine program: first-year outcomes and implementation costs. *Am J Ophthalmol*. 2023;251:43–51. 10.1016/j.ajo.2023.02.026. [PubMed: 36906094]
15. Killeen TK, Cassin SE, Geller J. Motivational interviewing in the treatment of substance use disorders, addictions, and eating disorders. In: Brewerton TD, Baker Dennis A, eds. *Eating Disorders, Addictions and Substance Use Disorders: Research, Clinical and Treatment Perspectives*. Springer; 2014:491–507. 10.1007/978-3-642-45378-6_22.
16. Charmaz K, Belgrave LL. Qualitative interviewing and grounded theory analysis. *The SAGE Handbook of Interview Research: The Complexity of the Craft*. SAGE Publications, Inc.; 2012:347–366. 10.4135/9781452218403.n25.
17. Nili A, Tate M, Barros A, Johnstone D. An approach for selecting and using a method of inter-coder reliability in information management research. *Int J Inf Manag*. 2020;54, 102154. 10.1016/j.ijinfomgt.2020.102154.
18. Younas A, Fàbregues S, Durante A, Ali P. Providing English and native language quotes in qualitative research: a call to action. *Nurs Open*. 2022;9(1):168–174. 10.1002/nop2.1115. [PubMed: 34725950]
19. Magaña D. Local voices on health care communication issues and insights on Latino cultural constructs. *Hisp J Behav Sci*. 2020;42(3):300–323. 10.1177/0739986320927387.
20. Al Shamsi H, Almutairi AG, Al Mashrafi S, Al Kalbani T. Implications of language barriers for healthcare: a systematic review. *Oman Med J*. 2020;35(2):e122. 10.5001/omj.2020.40. [PubMed: 32411417]
21. Escobedo LE, Cervantes L, Havranek E. Barriers in healthcare for Latinx patients with limited English proficiency—a narrative review. *J Gen Intern Med*. 2023;38(5):1264–1271. 10.1007/s11606-022-07995-3. [PubMed: 36720766]

22. Sentell T, Braun KL. Low health literacy, limited English proficiency, and health status in Asians, Latinos, and other racial/ethnic groups in California. *J Health Commun.* 2012;17(sup3):82–99. 10.1080/10810730.2012.712621.
23. Rights (OCR) O for C. HHS language access plan 2023. Accessed December 4, 2024 <https://www.hhs.gov/civil-rights/for-individuals/special-topics/limited-english-proficiency/language-access-plan-2023/index.html>; 2024.
24. Heath M, Hvass AMF, Wejse CM. Interpreter services and effect on healthcare - a systematic review of the impact of different types of interpreters on patient outcome. *J Migr Health.* 2023;7, 100162. 10.1016/j.jmh.2023.100162. [PubMed: 36816444]
25. Ortega P. Spanish language concordance in U.S. medical care: a multifaceted challenge and call to action. *Acad Med J Assoc Am Med Coll.* 2018;93(9):1276–1280. 10.1097/ACM.0000000000002307.
26. Ngo-Metzger Q, Sorkin DH, Phillips RS, et al. Providing high-quality care for limited English proficient patients: the importance of language concordance and interpreter use. *J Gen Intern Med.* 2007;22(S2):324–330. 10.1007/s11606-007-0340-z. [PubMed: 17957419]
27. Taylan C, Weber LT. Don't let me be misunderstood": communication with patients from a different cultural background. *Pediatr Nephrol Berl Ger.* 2023;38(3):643–649. 10.1007/s00467-022-05573-7.
28. Nguyen Q, Flora J, Basaviah P, et al. Interpreter and limited-English proficiency patient training helps develop medical and physician assistant students' cross-cultural communication skills. *BMC Med Educ.* 2024;24(1):185. 10.1186/s12909-024-05173-z. [PubMed: 38395858]
29. Translation and interpretation services | medicaid. Accessed December 4, 2024. <https://www.medicaid.gov/medicaid/financial-management/medicaid-administrative-claiming/translation-and-interpretation-services/index.html>.
30. Foiles Sifuentes AM, Robledo Cornejo M, Li NC, Castaneda-Avila MA, Tjia J, Lapane KL. The role of limited English proficiency and access to health insurance and health care in the affordable care act era. *Health Equity.* 2020;4(1):509–517. 10.1089/hec.2020.0057. [PubMed: 33376934]
31. DuBard CA, Gizlice Z. Language spoken and differences in health status, access to care, and receipt of preventive services among US Hispanics. *Am J Public Health.* 2008;98(11):2021–2028. 10.2105/AJPH.2007.119008. [PubMed: 18799780]
32. Gulati RK, Hur K. Association between limited English proficiency and healthcare access and utilization in California. *J Immigr Minor Health.* 2022;24(1):95–101. 10.1007/s10903-021-01224-5. [PubMed: 34097162]
33. Varma R, Mohanty SA, Deneen J, Wu J, Azen SP. Burden and predictors of undetected eye disease in Mexican-Americans. *Med Care.* 2008;46(5):497–506. 10.1097/MLR.0b013e31816080fe. [PubMed: 18438198]
34. Woodward MA, Hicks PM, Harris-Nwanyanwu K, et al. Eye care in federally qualified health centers. *Ophthalmology.* 2024;131(10):1225–1233. 10.1016/j.ophtha.2024.04.019. [PubMed: 38697267]
35. National academies of sciences, engineering, and medicine; health and medicine division; board on population health and public health practice; committee on the review of federal policies that contribute to racial and ethnic Health inequities. In: Geller AB, Polsky DE, Burke SP, eds. *Federal Policy to Advance Racial, Ethnic, and Tribal Health Equity*. US: National Academies Press; 2023. Accessed December 4, 2024 <http://www.ncbi.nlm.nih.gov/books/NBK596405/>.
36. Pelayo C, Mora Pinzón M, Lock LJ, et al. Factors influencing eye screening adherence among Latinx patients with diabetes: a qualitative study. *Transl Vis Sci Technol.* 2023;12(12):8. 10.1167/tvst.12.12.8.
37. Gagnon M, Kansal N, Goel R, Gastaldo D. Immigration status as the foundational determinant of health for people without status in Canada: a scoping review. *J Immigr Minor Health.* 2022;24(4):1029–1044. 10.1007/s10903-021-01273-w. [PubMed: 34601663]
38. Hill J, Rodriguez DX, McDaniel PN. Immigration status as a health care barrier in the USA during COVID-19. *J Migr Health.* 2021;4, 100036. 10.1016/j.jmh.2021.100036. [PubMed: 33778797]

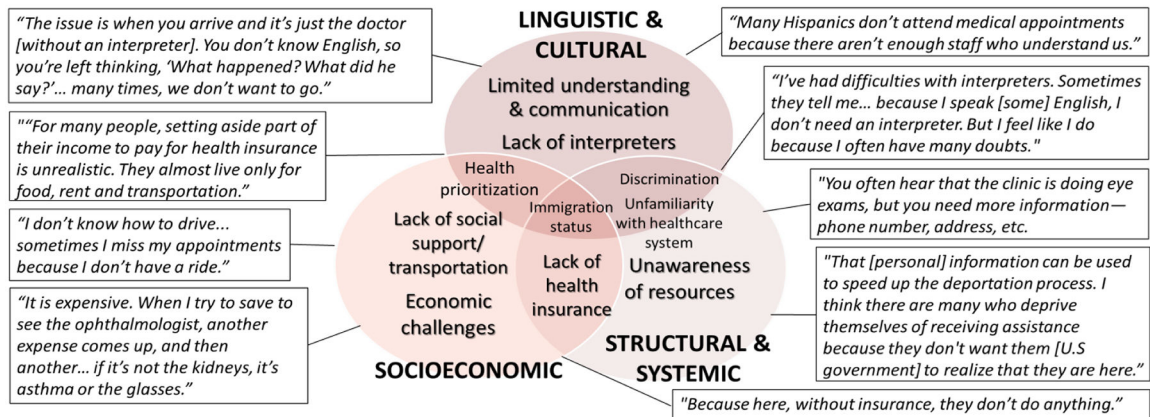
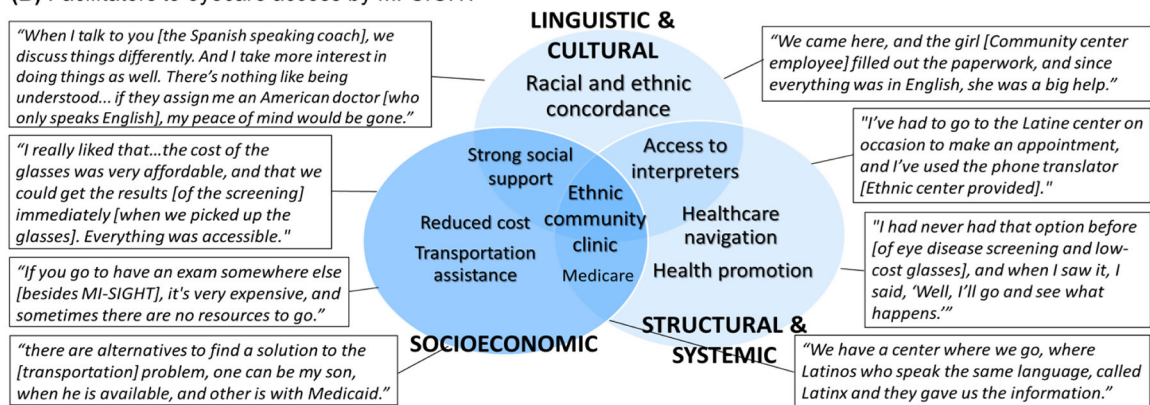
39. Saloner B, Wilk AS, Levin J. Community Health centers and access to care among underserved populations: a synthesis review. *Med Care Res Rev.* 2020;77(1):3–18. 10.1177/1077558719848283. [PubMed: 31079529]

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(A) Barriers to eyecare access**(B) Facilitators to eyecare access by MI-SIGHT****Fig. 1.**

Venn diagram illustrating three major themes from participant responses. (A) Barriers to eye care access, (B) Facilitators to eye care access. In both diagrams, text size and boldness indicate frequency of mention. Subthemes are conceptually grouped within and across the main categories. Surrounding participant quotes point to the themes they exemplify, demonstrating how these themes emerged from shared experiences.

Table 1

Supporting quotes.

Barriers to healthcare access quotes	
Linguistic and cultural challenges	
Language Barriers	"They send me a link, but it's in English, forms in English... you always have to take the document, start translating it, and ask someone to help you fill it out. There is always the language barrier." "The issue is when you arrive and it's just the doctor [without an interpreter]. You don't know English, so you're left thinking, 'What happened? What did he say?' ... many times, we don't want to go." "Like me, many are starting life here without fluent English. The fear of not understanding or being misunderstood prevents us from seeking care." "I understand English, I speak it, but... when it comes to explaining something in depth about my health, it becomes difficult for me." "Many Hispanics don't attend medical appointments because there aren't enough staff who can understand us."
Socioeconomic barriers	
Economic challenges and health prioritization	"I have three dependents on top of myself to support, and it is difficult to afford [eye care]." "It is quite difficult for me to go to the dentist; it is expensive. When I try to save to see the ophthalmologist, another expense comes up, and then another... if it's not the kidneys, it's asthma and the lungs, or glasses."
Lack of social support & reliable transportation	"I am alone in this country without my family... that's why I joined the MI-SIGHT program." "I don't know how to drive... sometimes I miss my appointments because I don't have a ride." "Sometimes I don't have someone to accompany me or bring me."
Lack of health insurance	"Without health insurance, it is very expensive." "I have never been able to have health insurance." "I need to go to the dentist, but I can't because I'm uninsured."
Systemic and structural barriers	
Unawareness of available resources	"There are many Latin people who don't know that support exists."
Navigating the healthcare system	"The health system is very different, and we do not know where to go, who can inform us, who can support us."
Immigration Status	"If one does not have an [U.S residence] ID... They do not assist you." "If you are not legal, many people hide... they endure their illness in hiding."
Facilitators suggested by participants	
Addressing linguistic and cultural barriers	
Access to an interpreter	"We came here, and the girl [Community center employee] filled out the paperwork, and since everything was in English, she was a big help."
Addressing socioeconomic barriers	
Reduce cost of care	"I'm self-medicating and using alternative methods for diabetes because two medications are extremely expensive, and I'm depleting my savings."
Addressing systemic and structural barriers	
Social support and transportation	"I am fortunate that my boyfriend has the willingness to help me." "Because she [participant's friend] was the transportation and then she accompanied me and I was able to come here."
Impact of MI-SIGHT interventions	
Motivation to join MI-SIGHT program	
Afordability	"Yes, because if you go to have an exam somewhere else, it's very expensive, and sometimes there are no resources to go; that's another problem too."
Peer Referrals	"Well, when some friends mentioned it. And that's why we attended this program."
Work needs	"That is something I do every year... I have presbyopia and farsightedness. My job makes my lenses wear out quickly, so I need my eyes to be in perfect health to keep working."
Access Factors	"I had never had that option before [of eye disease screening and low-cost glasses], and I saw it, I said, 'Well, I'll go and see what happens.'"
Satisfaction with MI-SIGHT program	
Language Concordance	"On top of helping us, [SIGHT] makes it even easier for those of us who don't speak English. I find that perfect, and the environment is great—everyone is very kind, from the reception to the person attending us."
Medical Insights	"I had a thorough eye exam... I'm leaving with many doubts cleared up and satisfied because I know what I have."

Barriers to healthcare access quotes	
	"They help us learn more deeply about the risks of glaucoma or developing it in the future... I think it's perfect."

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