Food Insecurity and Vision Loss: A Call for Integrated Preventive Care

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The ophthalmic exam revealed proliferative diabetic retinopathy, but the diagnosis alone didn't capture the depth of Mrs. A.'s story. A 58-year-old woman with longstanding diabetes who had never received a retinal screening. She learned about the free eye clinic through a friend and managed to attend. Mrs. A. shared that her vision had been deteriorating over the past few months, and just last month, it began interfering with her work: ultimately, leading to both her job and health insurance loss. She had also recently gone through a divorce and was struggling to afford food, medical care, and transportation, all while trying to manage her diabetes alone. These compounding events created a cascade of barriers that made it nearly impossible for her to prioritize her health.

After hearing her story, I connected her with local food banks and shared resources on diabetes management, including nutrition and physical activity. My hope was to ease her treatment burden and help her maintain some stability. But as I walked away from that encounter, I realized that none of these resources could undo the vision loss she had already suffered. Her experience turned food insecurity and diabetic retinopathy from abstract public health concepts into something painfully tangible, evidence of how systemic gaps manifest in real lives. Witnessing Mrs. A's condition made me question what it truly means to manage a chronic illness. Her diabetes wasn't uncontrolled because of noncompliance or lack of knowledge; it was because the systems meant to support her were never accessible in the first place. As I began researching food insecurity more deeply, I realized how often we, as physicians-in-training, are taught to focus on medications and metrics while overlooking the structural barriers that make those interventions effective or futile. It shifted the way I view my future role, not just as a prescriber or educator, but as someone responsible for recognizing and addressing the upstream causes of disease.

Despite advances in medicine, diabetic retinopathy continues to disproportionately affect individuals from underserved backgrounds. The USPSTF recommendation released in March 2025 emphasized that households with children, single caregivers, and older adults are disproportionately affected by food insecurity and face significantly higher risks for chronic disease.[1] Recent research further shows that patients living in socioeconomically disadvantaged neighborhoods are significantly more likely to develop proliferative diabetic retinopathy.[2] Seligman et al.[3] similarly emphasized how food insecurity is closely tied to increased chronic disease burden, including poorly managed diabetes. These upstream social determinants of health create a cycle that drives both metabolic dysfunction and ocular complications. Poor glycemic control leads to chronic hyperglycemia, which damages the retinal microvasculature over time. This triggers oxidative stress, inflammation, and pathological neovascularization—hallmarks of proliferative diabetic retinopathy that can result in permanent vision loss if left untreated.[4]

Tools like the Accountable Health Communities Screening Tool are generally recommended to assess whether patients have reliable access to healthy food.[5] However, screening alone is insufficient. Once needs are identified, clinicians must be equipped to connect patients with local food banks, mobile pantries, or nutrition-focused outreach programs. These partnerships serve dual purposes: addressing immediate nutritional needs while also preventing the progression of complications like diabetic retinopathy.[3]

Implementing such interventions poses challenges. Providers often face time constraints, limited training on addressing social needs, and a lack of institutional infrastructure to support resource navigation. In some communities, support networks are sparse or overwhelmed. Moreover, initiating conversations about food insecurity can feel deeply personal for patients and requires sensitivity and trust. Overcoming these barriers demands an interprofessional effort. By collaborating with case managers, social workers, registered dieticians, and community health workers, medical teams can more effectively address food insecurity as a health priority.

Nutrition education is another essential component of chronic disease care. However, effective education must go beyond simply sharing information; it must be tailored to patients' financial, cultural, and environmental realities, focusing on building sustainable habits. Medical nutrition therapy and behavior-focused interventions are core recommendations in the 2024 Standards of Care for Diabetes and are key components of Diabetes Self-Management Education and Support (DSMES).[6] These interventions are designed to equip patients with the knowledge, decision-making skills, and self-efficacy needed to manage diabetes effectively.[6]

Empowering individuals with practical, achievable dietary strategies can reduce treatment burden and support long-term health. Yet, education alone often falls short. A 2025 systematic review in Primary Care Diabetes emphasized that traditional Western protocols can be culturally insensitive and poorly suited for minority and low-income populations, often limiting engagement and long-term impact.[7] Programs that integrate cultural tailoring, community involvement, and language adaptation are more likely to improve uptake and outcomes.[7] Similarly, a recent CDC report emphasized that community-level interventions such as transportation assistance and produce prescription programs are essential to translating nutrition counseling into behavior change.[8] These findings emphasized that medical advice must be paired with tangible support such as culturally sensitive education, food vouchers, and system-wide partnerships that reduce the friction of following through on care plans.

By advocating for food security as a foundational aspect of chronic disease management, we can move toward a more equitable model of care. Healthcare systems should focus on treating food access not as an ancillary concern, but as a vital sign—one that demands screening and proper resource utilization. Through early screening, patient education, and cross-sector collaboration, we can reduce the burden of diabetic retinopathy and improve outcomes for those most vulnerable. Mrs. A's case reflects the crucial role those upstream interventions like food security screening and early resource connection can play in preventing irreversible health outcomes. Her experience is not an outlier, but a signal of where care must begin. Advocacy begins not just with raising awareness, but with integrating solutions into the care we provide: one patient, one community at a time.

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