

optical Prime by half Helen: Transforming Vision Care in Central Texas

By: Olivia Schneider*

*half Helen Communication Intern

Key Words: mobile clinic, vision care, myopia

Abstract:

Myopia, otherwise known as nearsightedness, has reached epidemic proportions and continues to grow. Left untreated, myopia can lead to amblyopia, the leading cause of blindness in children. It is also easily treated with a pair of prescription glasses, but only for those with unfettered access to eye care. half Helen is leading the charge to transform vision care by bringing care directly to patients. With funding and support from their local community, half Helen built their area's only mobile optometry clinic, optical Prime, and are on a mission to close the access to care gap for Central Texas.

Introduction

During school-based screenings, half Helen's Founder and Executive Director Chelsea Elliott learned that she was blind in her left eye and deaf in her right ear. After studying Helen Keller in 4th grade, Chelsea declared, "I'm half blind and half deaf, I'm half Helen!" The nickname has come to define her life's work.

Motivated by her own vision loss, Elliott founded half Helen to improve children's vision through an innovative delivery of care. At its founding, half Helen partnered with schools serving low-income communities to conduct state-mandated vision screenings. Since their launch in 2013, half Helen has screened more than 60,000 children for vision impairment. In 2019, recognizing that families were not able to access treatment for their child's vision impairment, half Helen expanded its programming with a new goal; close the access to care gap by transforming how vision care is delivered in Central Texas.

Why is vision care important?

Clear eyesight plays a critical role in our ability to learn, communicate, and contribute to our community. While adults experience more vision loss, vision impairment has a greater impact on children. It can delay motor, language, emotional, social and cognitive development, with lifelong consequences.¹ When basic refractive errors like astigmatism and myopia are left untreated, they can result in amblyopia, the leading cause of vision loss in children.² However, if caught early and "treated while the visual system is still maturing, [amblyopia] may be reversible resulting in normal vision."³ With regular care and monitoring, vision loss can be prevented.

While these impairments are reversible, they are on the rise. Vision disabilities are the most prevalent disabling condition in children. According to researchers, we are looking at the tip of the myopia-iceberg. Children in urban communities are more so affected due to increased indoor time and excessive studying/screen time.^{4,5} Myopia occurs when the myops in the eye fail to grow to their normal length, resulting from our sedentary, and indoor lifestyles. By 2050, 50% of the world will suffer from myopia.⁶

Treating vision impairments early can also ease the financial burden one might experience. In general vision impairments become more costly to treat the longer care is delayed and the greater the loss of vision. However, with preventive treatment, these costs can be reduced significantly and the patient's eyesight can be preserved.

Vision impairment such as myopia and astigmatism can be easily treated through corrective lenses, as well as contact lenses, and laser surgery. However, 61% of children lack access to eye exams and glasses.⁷ Some critical obstacles that families face when attempting to access eye care include lack of sufficient public transportation, and cost, even for the insured.⁸ This is a solvable problem and half Helen is leading the charge.

Finding the solution

While cost and transportation are formidable barriers to many people, half Helen looked at the problem and knew they could solve it. So, how do you transform the delivery of eye care so that everyone has equitable access to diagnosis and treatment of their vision impairment? You build a mobile eye clinic and bring eye care directly to patients.

With the solution in hand, half Helen set out to collect information from other mobile healthcare providers and form a plan. The Mobile Healthcare Association became an invaluable resource. The association offered an intensive training course on establishing a mobile clinic, and members shared their experience and expertise. Membership also opened the door to a number of vendors who specialize in building a variety of mobile clinic options.

The next step was to find the financial resources to purchase equipment and build a mobile clinic. half Helen knew it would take time. They approached a local giving circle called Impact Austin and were awarded a grant to purchase equipment to make glasses. Then they received a grant from the Austin Community Foundation to purchase the equipment for one exam lane. Having purchased equipment, half Helen then worked with the Central Texas Optometric Society to recruit optometrists to provide eye exams in their clinic.

With this initial investment and a couple of contract optometrists, half Helen began piloting their mobile eye clinic. The half Helen team would pack their eye exam equipment into an SUV, drive to their school partner's campus, and set up the equipment inside the school. At the end of the day, they would pack up the equipment and drive it back to their administrative office.

After a year of operation, half Helen's "pop-up clinic" became the proof of concept that foundations needed to fund the construction of a full-size clinic.

The introduction of optical Prime

half Helen's original concept for optical Prime was a 40-foot RV retrofitted into a functional mobile optometry clinic. However, funding constraints and shipping delays caused by the Covid-19 pandemic forced half Helen to reconceptualize optical Prime. Always the innovator, Elliott began to envision something that had never been done before - turn a tiny house into a mobile clinic.

half Helen took their idea of a tiny house mobile vision clinic to John King Construction. The construction team created blueprints to build optical Prime from the wheels up and all of their subcontractors generously donated their time and labor significantly reducing the cost of the build. At its completion, optical Prime is a 32-foot tiny house that remains on its trailer. John King Construction made sure it would be sturdy enough to withstand daily transport. With two exam lanes, has the capacity for 7000 patients to receive the most advanced and streamlined eye care experience with the newest refraction technology available to date.

half Helen launched eye care on optical Prime in August 2021. During the academic year, schools allow half Helen to care for their students between September and March. This provided half Helen with an opportunity to expand care to a secondary and revenue positive audience: adults. By joining Austin's Vision Voucher Program, half Helen is reimbursed for the care it provides to eligible adult patients. Funded by the St. David's Foundation, the Vision Voucher Program is a collaborative of federally qualified health centers that refer patients to half Helen for eye exams and glasses. The Vision Voucher Program is a resource for underserved adults who would otherwise not be able to receive such services.

Conclusion

The ever-innovative team at half Helen continues to grow and improve the transformation of eye care delivery in the Austin metro area. With optical Prime, they have made great strides in closing the access to care gap, but a significant gap still remains. They are currently in the process of using lessons learned to design a fleet of optical Primes with the goal to launch their second mobile optometry clinic in 2025.

References:

- 1) World Health Organization, "Blindness and Vision Impairment," World Health Organization, October 14, 2021, <https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment>.
- 2) Tara Capizano, "Amblyopia" American Association for Pediatric Ophthalmology and Strabismus, Last modified November 3, 2021 <https://aapos.org/glossary/amblyopia>.
- 3) Deborah A. Jones, Catherine A. Chiarelli, Barbra E. Robinson, Karen E MacDonald. "Eye See Eye Learn The Benefit of Comprehensive Eye Examinations for Preschools," *Canadian Journal of Optometry*, 74, no. 1 (2012): 15, <https://doi.org/10.15353/cjo.74.573>.
- 4) Jenny M. Ip, Kathryn A. Rose, Ian G. Morgan, George Burlutsky, Paul Mitchell, "Myopia and the Urban Environment: Findings in a Sample of 12-Year-Old Australian School Children," *Investigative Ophthalmology & Visual Science* 49, no. 9 (2008):3858-3863. doi: <https://doi.org/10.1167/iovs.07-1451>.
- 5) Brien A. Holden, PhD, DSc, Timothy R. Fricke, MSc, David A. Wilson, PhD, Monica Jong, PhD, Kovin S. Naidoo, PhD, Padmaja Sankaridurg, PhD, Tien Y. Wong, MD, Thomas J. Naduvilath, PhD, Serge Resnikoff, MD, "Global Prevalence of Myopia and High Myopia and Temporal Trends from 2000 through 2050," *American Academy of Ophthalmology* 123, no. 5 (2016): 1040, <http://dx.doi.org/10.1016/j.ophtha.2016.01.006>
- 6) Ibid.
- 7) "Guideline Brief Evidence-Based Clinical Practice Guideline Comprehensive Pediatric Eye and Vision Examination." *American Optometric Association*, (2017): 5.
- 8) Community Health Improvement Plan (CHIP), "Community Health Improvement Plan Austin/Travis County Texas," *Austintx.gov*, (2018): 16 https://www.austintexas.gov/sites/default/files/files/Health/CHA-CHIP/2018_Travis_County_CHIP_FINAL_9.12.18.pdf