



BARRIERS TO THE BUSINESS OF MYOPIA MANAGEMENT



Adopting a myopia management program requires a paradigm shift in your practice.

BY KEVIN CHAN, OD, MS, FAAO

You have just diagnosed a child with myopia. You have educated the parents that their child needs a pair of spectacles. Is that the end of the story?

The subject of myopia care for children seems novel to many parents, as well as clinicians, often leaving parents with doubt, skepticism, or frustration. What can practitioners do to overcome the barriers to providing myopia management for children?

WHY MYOPIA MATTERS

Myopia is arguably the fastest growing, though often overlooked, eye disorder in the United States and

worldwide. In the United States, it is estimated that the prevalence of myopia in the 12-to-54-year age group has reached 42%; this has nearly doubled in the past 3 decades.¹ The issue has become even more alarming globally, particularly in East Asia.^{2,3} It is estimated that approximately half of the global population will be myopic by 2050¹ (Figure 1).

PARENTS: 'WHY HAVE I NOT HEARD ABOUT IT BEFORE?'

Although myopia has indeed become a global health dilemma, knowledge gaps and misunderstandings regarding myopia care for children still exist

among the public. According to one survey, 65% of responding parents claimed they were somewhat cognizant of myopia, but only one in three were able to correctly identify and define myopia as nearsightedness.⁴ These results suggest that the subject of myopia has not garnered the attention it deserves. Another survey,⁵ by The Global Myopia Awareness Coalition, found that eye exams are generally listed by parents as “less of a priority” for their children than visits to primary care providers and dentists. Nearly 88% of responding parents said that comprehensive eye exams for children are not needed until school age.

Most parents hold to the mantra that “If there’s no complaint, don’t fix it.” Unfortunately, lack of recognition and delayed interventions for myopia in children leave a greater risk for high myopia, which, in turn, is likely associated with more severe eye complications, such as retinal detachment or glaucoma, later in life.

CLINICIANS: 'IS MYOPIA WORTH TREATMENT?'

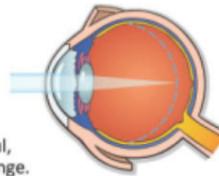
Eye care providers (ECPs) have the capacity and responsibility to make life-changing differences for children with vision problems. In particular, children with myopia are directly affected by blurry vision in school and daily life. However, a recent survey⁶ by the American Optometric Association found that ECPs are not yet aligned

© Myopia Profile

Clinical Myopia Profile

The clinical myopia profile is a summary of the extensive scientific data available on what increases and decreases risk of development or progression (worsening) of myopia.

Your optometrist has elected to profile your myopia because you/your child:
1. Currently has normal visual clarity but is AT RISK of developing myopia, or
2. Is already myopic, and at risk of further myopia progression.



MYOPIA (shortsightedness) is where the eyeball is too long or too powerful, resulting in blurred far vision. Vision for close objects is clear within a certain range.

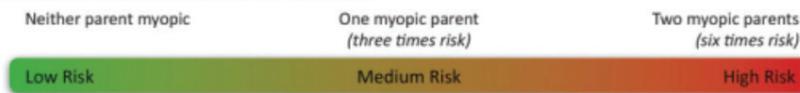
Why do we need to control myopia?

Generally once you become myopic, it tends to worsen over time. Higher levels of myopia are associated with higher risks of eye diseases like glaucoma, retinal detachment and cataract later in life.

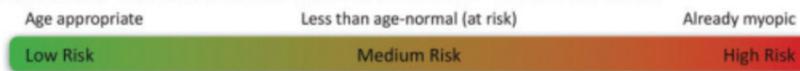
What causes myopia development and progression?

Genetics, each individual's characteristics and environment. Your clinical myopia profile is below.

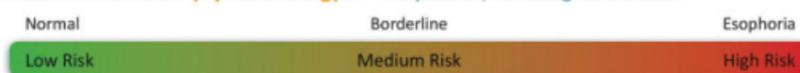
GENETICS: FAMILY HISTORY OF MYOPIA



INDIVIDUAL CHARACTERISTICS: VISUAL CLARITY – current far vision



VISUAL EFFICIENCY (eye teaming) 1 – esophoria / convergence excess



VISUAL EFFICIENCY (eye teaming) 2 – accommodative lag



Figure 3. The Clinical Myopia Profile is an easy and useful assessment tool to help young patients and their parents understand individualized risk factors of myopia and potential treatment outcomes. Available for free download from MyopiaProfile.com.

myopia care, refractive data can often help us to underscore the endpoint; however, this can often lead to underestimating the physiologic variations that precede refractive changes. Axial length (AL) has increasingly become a prognostic factor for the development and progression of myopic maculopathy,¹⁷⁻¹⁹ which is directly associated with the cumulative risks of visual impairment in adult life.²⁰ Just as OCT can aid in reaching a more definitive diagnosis of posterior segment disease, which could otherwise be misrepresented, AL can guide ECPs to make more precise prognoses in myopia management and also provide data to support amendments of existing treatment plans (Figure 2).

Although AL measurement has not yet become a standard of care in primary eye care, this should not be a barrier preventing ECPs from pursuing myopia management for their young patients. ECPs can invest in a portable A-scan or standalone equipment with AL functionality. They can also co-manage patients with colleagues who specialize in myopia management; making efforts in the best interests of patients will not risk anything, but will rather enhance mutual respect and loyalty among all parties.

BUSINESS LOGISTICS

Parents often cite financial considerations as a barrier to pursuing myopia management for their children.

Currently, treatments for myopia management are out-of-pocket health expenses. Although conventional contact lenses for vision correction may be covered by most insurance plans, interventions for myopia management are generally not. Payment options may include flex or health spending accounts or third-party health care financing.

Regardless of the treatment modality used, it is crucial to establish the core value of myopia treatment with parents. The key is to provide thorough patient education and lifestyle consideration for each child, so that parents can truly understand and appreciate the value of myopia management. For instance, young patients with active lifestyle are likely more motivated to pursue contact lens options (ie, orthokeratology or soft multifocal contact lenses), whereas topical atropine medication is generally reserved for children who are not yet receptive to contact lens wear, or it can be used as a combined treatment regimen along with contact lenses.

Other strategies can also be used to leverage your practice for providing myopia management services. First, it is vital to convey to parents that myopia management requires more than refraction alone. It involves thorough evaluation of the child's history of myopia, as well as family and social factors associated with myopia progression. Therefore, it is recommended to schedule a separate visit and allot ample time to establish baseline clinical data (eg, keratometry, cycloplegic refraction, axial length, binocular vision assessment) and to provide a qualitative, individualized myopia risk assessment (Figure 3) based on each individual child's profile.

If parents have not yet committed to interventions, the chapter of myopia care is far from over. Remember that myopia care is more than taking a snapshot; it's a continuum of efforts for children's lifelong vision. Clinicians should schedule a follow-up visit in 3 to 6 months to monitor the patient's myopia status. A child at 7 years of age who is progressing by

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at least 1.00 D per year is considered at-risk,¹¹ and should prompt initiating discussion and interventions for myopia management.

Volunteering to offer educational seminars at PTA meetings or to provide vision screening for school-age kids can help you gauge public awareness about eye care in your community. You can also make your practice stand out via social media by sharing your patients' and parents' treatment testimonials (upon their consent). All of these efforts help engage public interest and inquiries about myopia management in your office.

AN EYE ON MANAGING MYOPIA

Bringing myopia management to the forefront of your practice requires a full spectrum of clinical acumen and a paradigm shift regarding myopia. It also calls for a mission and

commitment to stepping out of your comfort zone. When you do it right, it can be an invigorating and rewarding experience for you, your patients, and their families. It can also drive financial growth for your practice and help to develop lifetime loyalty from families and the surrounding community. With myopia management in full force, we can all partake in the mission to conquer myopia in 2020. ■

1. Holden BA, Fricke TR, Wilson DA, et al. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. *Ophthalmology*. 2016;123:1036-1042.
2. Pan CW, Dirani M, Cheng CY, Wong TY, Saw SM. The age specific prevalence of myopia in Asia: a meta-analysis. *Optom Vis Sci*. 2015;92:258-266.
3. Wong YL, Saw SM. Epidemiology of pathologic myopia in Asia and worldwide. *Asia Pac J Ophthalmol (Phila)*. 2016;5(6):394-402.
4. New survey shares what parents know about myopia. CooperVision. 2019. <https://coopervision.com/protect-kids-vision>. Accessed February 5, 2020.
5. New global myopia awareness coalition survey reveals parents need more education about myopia treatment options. *Vision Monday*. February 5, 2020.
6. Akerman D. New opportunities for proactive myopia care. *Review of Optometric Business*. August 14, 2019.
7. Lipson MJ, Brooks MM, Koffler BH. The role of orthokeratology in myopia control: A review. *Eye Contact Lens*. 2018;44(4):224-230.
8. Walline JJ, Greiner KL, McVey ME, Jones-Jordan LA. Multifocal contact lens myopia control. *Optom Vis Sci*. 2013;90(11):1207-1214.
9. Tan D, Tay SA, Loh KL, Chia A. Topical atropine in the control of myopia. *Asia Pac J Ophthalmol (Phila)*. 2016;5(6):424-428.

10. Wolfohn JS, Calossi A, Cho P, et al. Global trends in myopia management attitudes and strategies in clinical practice. *Cont Lens Anterior Eye*. 2016;39(2):106-116.
11. Donovan L, Sankaridurg P, Ho A, Naduvilath T, Smith EL III, Holden BA. Myopia progression rates in urban children wearing single-vision spectacles. *Optom Vis Sci*. 2012;89(1):27-32.
12. Flitcroft DJ. Is myopia a failure of homeostasis? *Exp Eye Res*. 2013;114:16-24.
13. Wallman J, Winawer J. Homeostasis of eye growth and the question of myopia [published correction appears in *Neuron*. 2012;74(1):207]. *Neuron*. 2004;43(4):447-468.
14. Raviola E, Wiesel TN. An animal model of myopia. *N Engl J Med*. 1985;312(25):1609-1615.
15. Bullimore MA, Brennan NA. Myopia control: why each diopter matters. *Optom Vis Sci*. 2019;96(6):463-465.
16. Gifford KL. Childhood and lifetime risk comparison of myopia control with contact lenses. *Cont Lens Anterior Eye*. 2020;43(1):26-32.
17. Meng W, Butterworth J, Malecaze F, Calvas P. Axial length of myopia: a review of current research. *Ophthalmologica*. 2011;225(3):127-134.
18. Fang Y, Yokoi T, Nagaoka N, et al. Progression of myopic maculopathy during 18-year follow-up. *Ophthalmology*. 2018;125(6):863-877.
19. Yokoi T, Ohno-Matsui K. Diagnosis and treatment of myopic maculopathy. *Asia Pac J Ophthalmol (Phila)*. 2018;7(6):415-421.
20. Tideman JW, Snael MC, Tedja MS, et al. Association of axial length with risk of uncorrectable visual impairment for Europeans with myopia. *JAMA Ophthalmol*. 2016;134(12):1355-1363.

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