

Myopia Management

Developing Myopia as a Specialty



MARK TOSH / SENIOR EDITOR

Myopia is not a new vision condition, but the growing awareness of the eye health risks associated with this common ophthalmic disorder, especially among eye-care professionals, is a somewhat contemporary phenomenon. Indeed, myopia is the most common ophthalmic condition in the world, with an estimated 34 percent of the world's population, or roughly 2.62 billion people, affected by this condition, according to recent research.

This increasing awareness, while beneficial to global eye health and vision, of course, also has begun to open up fresh practice-building opportunities for ODs. A specialty such as myopia management—or any of the myriad of other areas

of care that ECPs are exploring today—can open up or even deepen relationships with patients and families in a local or regional practice area. Patients often will drive hours for care that they find goes above and beyond.

And because myopia is often progressive, there is concern that the condition will lead to higher and higher degrees of myopia, or high myopia. (There are an estimated 163 million people worldwide who have high myopia, usually above -6.00 diopters and worse than 20/400 uncorrected vision.)

“Myopia management is white space,” said Dwight Akerman, OD, FAAO, chief medical editor of *Review of Myopia Management*. “To date, most eyecare professionals have not incorporated myopia management into their practices to any signifi-

cant extent, primarily due to a lack of knowledge about how to integrate pediatric myopia management into a primary care optometric practice. With many treatment options available that have demonstrated efficacy, ECPs have a professional responsibility to discuss myopia management options with all parents of children at risk for progressive myopia.”

Sounding the Alarm on Myopia

The growing prevalence of myopia—which according to many eyecare professionals has risen to the level of a pandemic—came to the fore in 2016 in a paper published in *Ophthalmology*, the official journal of the American Academy of Ophthalmology, according to Akerman.

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“The Holden, et al, paper published in the journal *Ophthalmology* sounded the alarm on the global pandemic of myopia,” he said, noting that this paper projected that by 2050 there would be 50 percent of the world’s population who would be myopic. Adding to the problem, 10 percent of the population would be highly myopic. “The issue there is that highly myopic people are more prone to retinal detachment, myopic macular degeneration, glaucoma and premature cataracts, among other issues,” Akerman said.

He added, “There had been a lot of papers published, but this paper was really the alarm bell for the world to say, ‘We need to take notice of this, and we need to develop treatments to slow or stop the progression of myopia.’”

The economic costs of myopia are high, also, with an economic impact of uncorrected refractive error estimated at a loss of \$202 billion in global GDP.

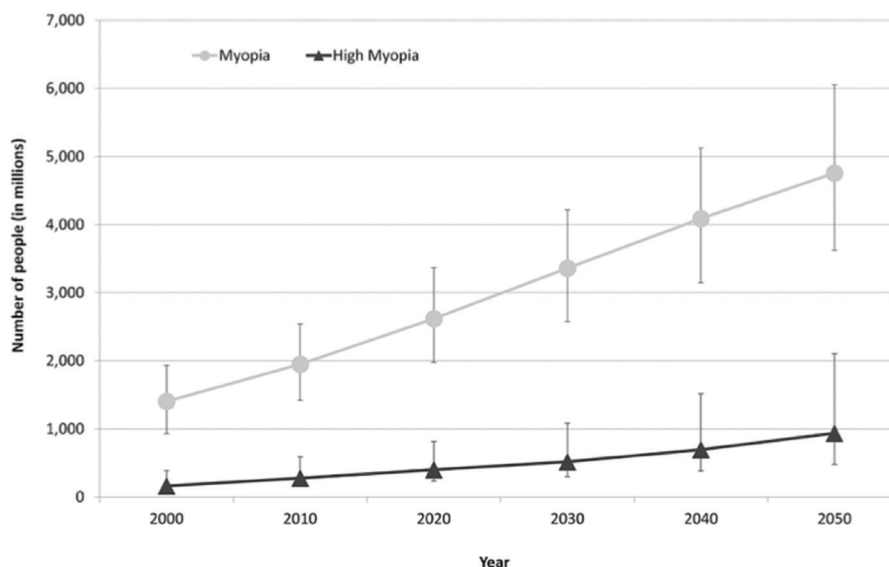
While there is not universal agreement about the causes nor the best treatment options for myopia, there is increasing evidence that creeping myopia can be managed.

Recently, groups such as the Global Myopia Awareness Coalition (GMAC) and the Brien Holden Vision Institute have been working to raise awareness among optometrists about the prevalence of myopia—not only in the U.S. but worldwide. And the prevalence of myopia is rising rapidly, while the age of onset is coming earlier for many children.

Myopia prevalence in the 5- to 19-years-old age group of American children is 42 percent, according to recent research.

Genetics play a key role in the onset of myopia, such as a family history of eyesight issues increasing the likelihood of a child’s risk of myopia. If neither parent is myopic, the chance the child will develop myopia is lower, according to recent research. But, if one parent is myopic, it increases the child’s chance of developing myopia by three times and this doubles to six times if both parents are myopic.

The Global Prevalence of Myopia and High Myopia Is Rising Rapidly



Source: Holden, B. A., Fricke, T. R., Wilson, D. A., Jong, M., Naidoo, K. S., Sankaridurg, P., ... & Resnikoff, S. (2016). Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. *Ophthalmology*, 123(5), 1036-1042.

Myopia Management in Practice

What all these statistics mean is that myopia management represents an enormous opportunity for optometry, a health care profession that is appropriately positioned with clinical skills, staffing structure and professional organization and support to define and deliver the highest standards of care.

According to Akerman, there are a few key principles for ODs to follow on the path to an effective myopia management program. They are: being proactive; identifying risk factors; providing information, advice and recommendations; and prescribing appropriate treatments to slow progression and avoid high myopia.

The communication approach with parents and children also plays a critical role in a myopia management method. Akerman recommended using language that parents can easily understand and creating a package of written material that explains the eye health risks of myopia and treatment options in plain language. The materials might include

peer-reviewed articles, but not too many, he said, and it’s also important to explain to parents that myopia care, similar to orthodontia, may not be covered by insurance.

It’s also important that any educational materials are designed to improve parental and patient understanding and adherence to prescribed treatments.

Research indicates that each diopter in treatment regimens matters, and that slowing myopia by 1 diopter should reduce the likelihood of a patient developing myopic maculopathy by 40 percent. Additionally, this treatment benefit accrues regardless of the level of myopia, the research notes.

Akerman noted that this myopia pandemic is global and increasingly affects children in the U.S., as well. A journal paper published two years ago that looked at the prevalence of myopia among teenagers found that rate at 42 percent. (This paper in its research looked at 60,000 teenagers between the ages of 5 and 19 years old, who represented

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To learn more about incorporating myopia as a specialty into your practice go to Review of Myopia Management at reviewofmm.com.



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a mix of Caucasians, Chinese, African-Americans and other ethnicities.

“This is not just an East Asian problem, it’s a global problem and it is affecting the U.S. practitioners as well,” Akerman said. “So slowly but surely, U.S. practitioners are realizing that ‘Ok, I am seeing these patients in my practice and perhaps I should do something.’”

The First FDA Approved Treatment

Before Nov. 15, 2019, the date the Food and Drug Administration approved the CooperVision MiSight 1 day lens, the treatments for myopia in the U.S. were considered off-label prescribing. So, whether an ECP wanted to prescribe orthokeratology, or myopia control soft lenses or even low-dose atropine, it had to be done in an off-label process, which requires a signed consent form. The ECP is, in effect, saying “In my best medical judgment, I am recommending this treatment to you.”

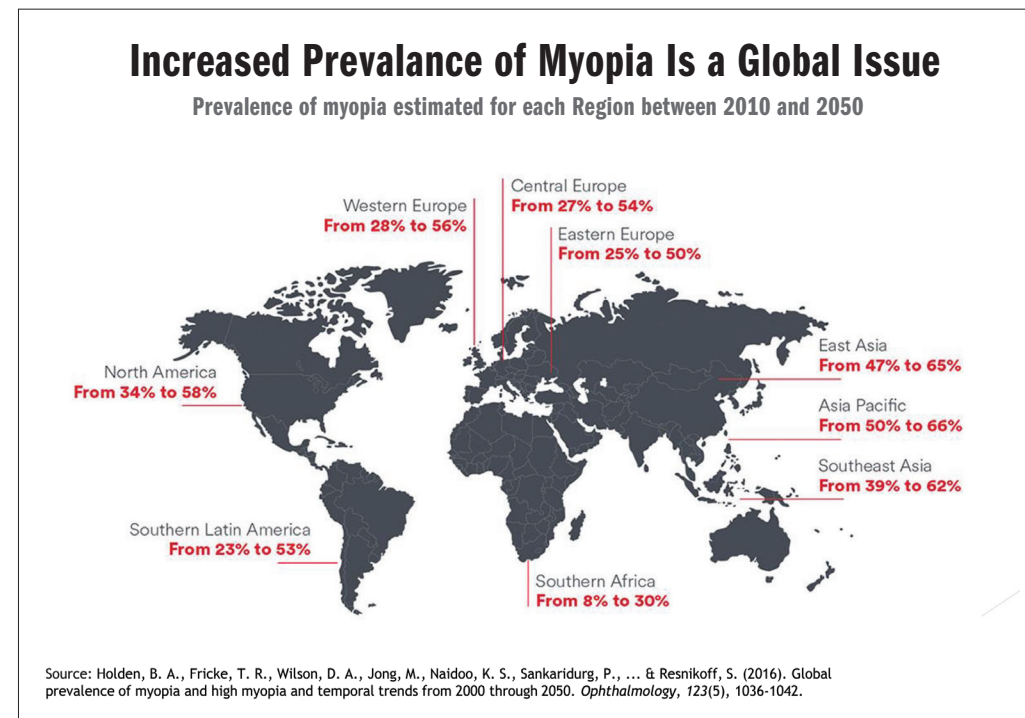
“Practitioners are hesitant to pull out these informed consent forms and ask the parents to sign it,” Akerman noted. “I think this has been a little bit of an issue [for optometrists], but MDs do off-label all the time.”

This has slowed the progress and uptake of myopia control. “Most practitioners today in the U.S. are taking a kind of wait and see attitude, but [awareness] is growing,” he said. “And now that CooperVision has FDA approval for the MiSight lens, I think that will go a long way toward getting practitioners behind myopia control and proactively prescribing.”

He added, “The big buzz words right now are, ‘Let’s get proactive.’ We now have a product, a specific product that has been well-tested and approved by the FDA with a specific labeling indication for myopia control. Now we have something.”

Treatments on the Horizon

There are several other products for the treatment of myopia that are seeking regulatory approval. These include three topical low-dose at-



ropine products that are in clinical trials in their efforts to gain a labeling indication for myopia management. Once any of these three topical products are commercially available with a labeling indication that will support the effort to increase myopia awareness.

In addition, Visioneering Technologies Inc. has developed a one-day multifocal contact lens that has been shown to slow the progression of myopia. This lens has a “CE” mark—which means it is a medical device made to meet the requirements of the Medical Devices Directive (MDD)—but it does not have an approved FDA indication for myopia.

An often-used approach to treating myopia in the U.S. is the specialty rigid lenses that have been shown to lessen progression in children. Orthokeratology (ortho-k) lenses are worn at night and change the corneal topography to correct low to moderate amounts of myopia.

Also, Hoya, Essilor and Zeiss are all actively conducting research on whether spectacle lenses

can be used to treat myopia. Hoya has licensed technology that it calls MyoSmart spectacle lens. This lens (with Defocus Incorporated Multiple Segments, or DIMS) has been shown in a randomized clinical trial (conducted in Hong Kong) to slow progression of myopia by about 60 percent, according to Akerman. “People are really excited about this,” he added, noting that the lens is commercially available in China and Hong Kong now.

Time spent outdoors has been shown to be protective against myopia, also, potentially due to light stimulation of retinal dopamine. Still, it appears that public health interventions are going to be needed if the growing myopia epidemic is to be managed.

To better understand how individual ODs are working to build a myopia management specialty in their practices, *Vision Monday* talked to a few doctors who have a range of different experience in this specialty area. Their stories are presented on the following pages. ■

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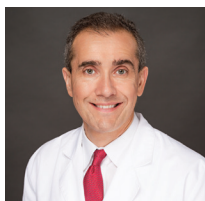
A 20-Year Journey to Perfect the Practice of Myopia Management

HAMILTON TOWNSHIP, N.J.—Dr. Nicholas Despotidis, a partner with Eyecare Professionals, has invested considerable time and resources over the past two decades to become one of the leading practitioners of myopia management. During this time, Despotidis has written two books and developed a TED talk on the myopia topic, while also conducting annual workshops on practice management techniques.

He first became involved with myopia management when one of his two sons developed myopia, which was “well before it was in vogue,” he noted.

In optometry school, students are often taught that myopia is genetic, he noted, but his children began developing myopia when they were in second grade. “This didn’t make any sense because my wife and I didn’t wear glasses until much later in life,” he said.

In 1999, he fit his oldest son with ortho-k lenses even though they weren’t FDA approved for slowing myopia and even though the evidence supporting



Dr. Nicholas Despotidis



ortho-k treatment at that time was anecdotal. “This just set me on a career-long path [once] I noticed that this helped stabilize my children’s eyesight,” he said.

When the research became public that ortho-k lens treatment was beneficial to slowing myopia progression, Despotidis said he was “already professionally on that bandwagon.”

Despotidis is known as a pioneer in the use of the ortho-k corneal reshaping contact lenses, which are used to slow down or prevent deterioration in the eyesight of children and young adults. He’s the lead author of the book, “My Chil-

dren Are Nearsighted Too.”

Doctors in the practice (including three of the five ODs who are seeing patients) see myopia management patients four days each week. Most of the patients are children already wearing ortho-k lenses, and most parents want to come in for their children’s eyecare visits after school.

Despotidis said he is not convinced yet that there is a majority of U.S. parents who are aware of the ongoing myopia epidemic.

“Even though there is a myopia epidemic, it doesn’t mean that every parent is interested or concerned about their children’s progressive myopia,” he explained. “This is something that I liken to the obesity epidemic. As parents, we know our kids are heavier probably than they should be, and they may not be eating as nutritionally or maybe are not as active as they should be. But this doesn’t mean that we’re all doing something about it. It’s the same thing with myopia.” ■

San Francisco ECP Draws Upon Treehouse Eyes’ Resources

SAN FRANCISCO—The philosophy at Pacific Rims Optometry in San Francisco is straightforward and easy for patients to comprehend. The practice—with two locations in the city—notes that its optometrists will take the time to explain the results of an eye exam, describe the options and listen to each patient’s eyecare needs.

Selena Chan, OD, is the managing doctor of the two clinics in San Francisco. She has been in practice for roughly 20 years following her graduation from the Southern California College of Optometry in Fullerton, Calif.

Working in the area of myopia treatment came naturally to her, almost out of necessity. “I first became interested in treating and preventing myopia progression because of my kids,” she said. “Both my husband and I have high myopia. My husband’s prescription was over -12.00 diopter and he had cataract surgery at an early age. My prescription

was over -5.50 diopters.”

She also noted that her brother had high myopia of over -8.50 diopter and suffered from a retinal detachment. “When my daughter first became myopic eight years ago, I didn’t want her to have similar eye issues as my husband and brother. I decided that I had to find ways to slow her myopia increase.”

It was around this time, also, that Chan met Gary Gerber, a co-founder of Treehouse Eyes, at Vision Expo West, where he spoke about practice management and the Treehouse Eyes approach to myopia management.

“From those talks, I gained a lot of respect for Gary and have always wanted to have his team help my practices grow.”



Drs. Selena Chan and Gary Gerber

She said the myopia management segment of her practice became much more active in the 2018-19 period, right before she became one of the Treehouse Eyes’ first expansion efforts. She had been treating myopic children for about seven years previously.

“Joining Treehouse Eyes has giving me the confidence to present

all the treatment options to the patients and their parents,” she explained. “I was also able to use the Treehouse tools to present the case for myopia management in a systematic way.”

As a Treehouse Eyes practice, Chan has begun remodeling an exam room (expected to finish this month) in a way to provide consistency with the Treehouse Eyes experience all patients receive regardless of which Treehouse Eyes site they visit. ■

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Mentors Pass Along Key Elements of Myopia Management

PARK RIDGE, Ill.—Myopia management is just one part of the special services that Dr. Daniel Press emphasizes at the Park Ridge Vision practice here, but it is a growing area and a significant component of the overall practice. Press noted that he sees the importance of taking an individualized approach to treating each myopic patient.

“For me, the interest in myopia stems from working with pediatric patients,” he said. “I would say my primary specialty is vision therapy, vision rehabilitation and in working with a large pediatric patient base. And you can’t ignore what you see in terms of the increasing prevalence and the progression of myopia.”

Press, who has been practicing 13 years, said one of the things he has learned about working with myopic patients is that it’s important to develop communication skills that connect with children at their level and “with language that they understand.”

He added, “I will tell you that when I first graduated optometry school I didn’t have the skills that I do have now. For me, it’s very important to address the child first primarily. I know the parent is ultimately going to make the decision, but if the child is not on board, then you are not going to get anywhere.” In walking the patient and the parents through the evaluation, it’s important to talk openly and honestly, and to use language the child can understand, he added.

“Our chief concern is to make sure that the child has healthy eyes and healthy vision for the rest of their life, and that school can be as easy as it can be and that they can perform as best as they can in sports.”

Press said his practice model has been influ-



Dr. Daniel Press

enced by several ECP mentors who he worked with or has been close to during his career. They are his father, Leonard Press, who has a practice in Fair Lawn, N.J., and Dr. Nick Despotidis, a leader in the field of myopia management who also practices in New Jersey. Press also was fortunate to know Dr. Stuart Grant back in 2006

when he was able to shadow Dr. Grant in Santa Monica, Calif. (Press said Grant is considered “the father of overnight ortho-k treatments.”)

When he moved to Chicago in 2012, he worked with Dr. Barry Eiden, whom he credits for helping him develop a comprehensive approach to myopia management. ■

Orlando Practice Finds Success With a ‘Proactive’ Approach to Myopia

OCOOE, Fla.—Dr. Roxanne Achong-Coan of the Coan Eye Care & Optical Boutique located here has been deeply interested in working with myopic patients and staying abreast of treatment options for most of her career. She is certified in the fitting of Paragon CRT lenses and is a Fellow of the International Academy of Orthokeratology and Myopia Control (FIAOMC). She’s also one of the first to be involved with the recently launched Brilliant Futures Myopia Management Program by CooperVision.

Achong-Coan said she decided to become actively interested in myopia management, in part, because she was myopic while growing up and her two sons also are myopic. “I was already ahead of the game doing myopia management [when they were diagnosed], and I knew what we needed to do,” she said.

Although myopia has become a much-discussed topic among eyecare professionals, Achong-Coan said she hasn’t observed a significant increase in



Dr. Roxanne Achong-Coan

awareness among patients in her Orlando marketing area. She noted there are a few referrals to her practice, and the common question patients are asking is, “Why wasn’t this mentioned to me before?”

“In our practice, we try to be proactive about it,” she said, especially when the practice is aware of a family history of myopia for its pediatric patients. “We are planting the seeds right now, and we are explaining the risks of myopia.”

Achong-Coan noted that over the years she has modified her tactics for treating myopic patients as new options become available and because of the increase in the amount of data on the topic that is now available. “Every year I make small ad-

justments to what I do, and the lens designs are improving, too,” she said, noting that by attending various professional meetings she stays well-informed on treatment protocol.

Addressing the topic with both the patient and the parents also is a key part of effective myopia management. “You want parents to feel comfortable and to know that they are going into a [sound] program.... And it’s really key that we have some kind of support network for them,” she said.

In terms of enhancing the support network, Achong-Coan said she is looking forward to the launch of a new app under the umbrella of CooperVision’s Brilliant Futures program, which she said will significantly improve engagement between ECPs and their myopic patients. “There will always be constant communication with the app,” she said, adding that the app also should give doctors easy access to research, a toolbox of resources and other myopia management data. ■

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GMAC's 'Influencer' Campaign Hits the Mark in Driving Awareness

In late 2019, the Global Myopia Awareness Coalition set out to help teach parents about the importance of managing myopia in children with its first media campaign, which was built upon an influential group of influencers: social media moms. That effort, tagged the #VisionMission Influencer Campaign, accomplished its goals, according to GMAC chairman Matt Oerding.

"Engagement was more than double what we had expected," he noted, while the "reach" of the campaign was in line with projections. "We know [engagement level] is what ultimately drives people to really digest the content and, hopefully, take some action," added Oerding, who also is a co-founder of Treehouse Eyes, which specializes in myopia care.

The campaign achieved a 12 percent awareness rate (versus a forecasted rate of 2 percent to 5 percent), and a 4.5 percent "consideration" score, which was determined by evaluating comments made to the influencers' posts. As of mid-January, the campaign had about 600,000 impressions across the influencers' post on a range of social media channels.

The pillars of the effort are the 10 "mommy bloggers" who completed a "#VisionMission," which means taking their children to visit an eyecare practitioner and then describing the experience on social media (i.e., blog posts, Instagram stories, and content shared on Pinterest and Facebook). GMAC is working with the public relations agency Golin in developing and executing the program.

The social media campaign was timed to coincide with the December holiday season when schools are closed, and parents have an easier time scheduling eyecare visits.

The 10 influencers—who are in urban regional markets with higher than average myopia prevalence—have about 3 million followers overall, ranging from as many as 500,000-plus to as few as 100,000. Their home markets include Los Angeles, Seattle, Dallas and Atlanta, among others.

GLOBAL MYOPIA AWARENESS COALITION

CAMPAIGN SUCCESS

Awareness

Objective: Educate parents on myopia and why it is a significant barrier to their child's ability to do their absolute best if they don't treat the underlying disease

KPI **12%**
Instagram engagement rate on in-feed posts
✓ Exceeded 2-5% KPI

Additional Metrics

49 Total influencer posts across social channels	357.2K Instagram Story views (60% of total impressions)	29 Shares of content to GMAC partner channels
595.2K Impressions on all posts across channels	\$1.66 Cost-per-engagement (CPE)	2.5M Followers of GMAC partner social channels

NOTE: All metrics reported as of 1/7

GOLIN

"We were very careful, along with the agency, in vetting the influencers chosen for this research and campaign," Oerding said. "We wanted to partner with influencers who really value quality content. And we wanted people who were really motivated by the mission, and who engaged with it."

In the screening process, Golin narrowed the candidates down to those influencers who have compelling stories to share, which means they might be myopic themselves, have children who are myopic or have a family history of eyecare issues, Oerding said.

"I think that vetting process drove some of the results that we are seeing," he said. The content is now also being shared by GMAC member companies, who have 2.5 million followers and who will continue to share the content until April.

Oerding added, "I am not a social media expert, but I knew that [12 percent] was high. I talked to a couple of friends outside the industry, and they said, 'Yes, if you can get 2 percent or 3 percent, that's typically pretty good.' ... But to be at 12 percent, I think it just shows how many people have connected to their stories that they are sharing."

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An influencer post by blogger Motherhood in Hollywood for the GMAC campaign.

Blogs in the #VisionMission Influencer Campaign:

Lifestyle Buzz by Maria
The Analytical Mommy
The Mama Maven
Obsessed by Portia
Lauren Stewart DC
The Ashmores Blog
Lovely Lucky Life
Motherhood in Hollywood
Joyfully Green
I Am Style-ish

In addition, Oerding noted that GMAC, which operates as an advisory group under the umbrella of the World Council of Optometry, has added three new members for 2020 (Johnson & Johnson Vision, Bausch + Lomb and PentaVision) and that there are other firms interested in coming on board this year. The new members join 12 other companies that previously committed to the myopia management effort. Those 12 are: Alcon, CooperVision, Essilor, Euclid Systems, Hoya, Jobson Medical Information, Menicon, Nevakar, Oculus, SightGlass Vision, Sydnexis and Visioneering Technologies Inc. ■

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