

MARCH 2023



PRESIDENT'S DESK

Happy Spring, ALLDocs Members!



Kerry Gelb, OD
President

Happy Spring ALLDocs members! Hoping your 2023 is off to a successful start!

We had a fantastic meeting in Cabo, lecture videos are finally available on the ALLDocs website.

Log on to: www.alldocsod.com with your username and password to review those excellent lectures or see them for the first time, if you missed the meeting. If you have any suggestions for speakers please post them on the discussion forum or email them to ALLDocs: news@alldocsod.com.

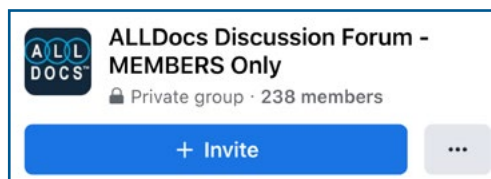
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Save the Date! ALLDocs Annual Meeting: Sept 10-15, 2023

The ALLDocs Board would like to extend a special congratulations to board member Dr. Jack McIntyre and his fiancé, Libby Averyt!

Dr. McIntyre has dedicated years of service to the ALLDocs Board and is a true asset to ALLDocs. We are very happy to share the good news of his recent engagement with our ALLDocs family! Congratulations Jack and Libby!



Pictured: Dr. Jack McIntyre and fiancé Libby Averyt, ALLDocs Meeting, Cabo 2022 (pre-engagement). Congratulations!



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Deciding on Strabismus Surgery: Identifying Key Factors



Patients living with constant strabismus face a lifetime of challenges, with studies showing that they are more likely to be diagnosed with psychological disorders and have low self-esteem and are less likely to find a partner, marry, or have a family.^{1,2} Patients in their 30s with uncorrected strabismus are more likely to have long-term psychological disorders than younger individuals. Those who live with uncorrected strabismus also had higher rates of homicidal and suicidal ideation.²

Optometrists are obligated to make all possible treatments known and available to those interested in pursuing better vision, including those with strabismus. Creating the best possible outcome involves a collaborative effort between optometrists and strabismic surgeons.¹ To optimize this collaboration, it is important to:

- Take time to visit each other's practices
- Educate staff on how each profession contributes to successful outcomes
- Schedule regular meetings between teams to discuss specific cases

When to Refer

Understanding when to refer patients with strabismus for surgery and combining the skills of a good optometric vision therapist can give them the best opportunity for cosmetically straight eyes with some level of stereopsis.¹ To facilitate this process, follow these steps:

1. Measure best-corrected visual acuity (VA) for each eye
2. Evaluate binocularity to determine deviation and if any immediate spectacle compensation might improve binocular stasis

3. Evaluate ocular motor and accommodative systems
4. Determine if there is any appreciation of diplopia under any condition
5. Identify the level of suppression and fusion
6. If visual motor function can improve with vision therapy (VT), have patients complete 8 sessions and then reevaluate
7. If improvements can be made, continue with 8 more VT sessions and reevaluate again
8. If improvement plateaus, a referral for surgery should be suggested
9. After surgery, reevaluate visual motor skills and post-VT activities to maintain gains made with surgery

Consider Procedure Risks

Patients with strabismus who are considering surgery should be educated on the potential risks. For example, unsatisfactory eye alignment is more likely after surgery in patients with poor fusion potential or with more complicated types of strabismus. Patients with dense amblyopia or structural problems in one or both eyes have limited potential for binocular vision and do not possess the fusional mechanisms needed to improve or maintain eye alignment.¹ Furthermore, patients with neuro-developmental anomalies have higher rates of under- and over-correction after strabismus surgery.³

Exhaust All Tools & Techniques

Experts say there is no rush to recommend surgery as a first-line treatment for strabismus. They recommend waiting until all available tools and techniques are exhausted before proceeding to an invasive operation.¹ Optometrists and surgeons should collaborate to ensure that patients experience the best possible outcomes. Developing all visual skills can benefit patients because it provides sensory fusion. The critical stage for sensory fusion is not as limiting with newer approaches being used in VT.¹

SOURCES

1. Montecalvo B. To cut or not to cut? Weighing strabismus surgery referral. *Rev Optometry*. April 15, 2021. Available at: www.reviewofoptometry.com/article/to-cut-or-not-to-cut-weighing-strabismus-surgery-referral
2. Mohny BG, McKenzie JA, Capo JA, et al. mental illness in young adults who had strabismus as children. *Pediatrics*. 2008;122(5):103-108.
3. Coats DK, Olitsky SE, eds., Unexpected postoperative alignment, in: *Strabismus Surgery and Its Complications*. Berlin, Heidelberg: Springer; 2007;291-294.

Wanted: More Guidance for Older Contact Lens Candidates



Contact lenses are a good option for many patients with presbyopia, especially with improved optical designs that are now available in modern multifocal contact lenses. However, people older than 40 years tend to be more unwilling to try these lenses than younger people.

A recent study surveyed patients older than 40 years to investigate their perceptions of contact lenses for presbyopia. Overall, about 50% of all participants wore contact lenses, but lens wear was less common among older people. Only 25% of contact lens wearers used multifocal contact lenses. A drop off in contact lens use was seen in patients older than 50 years due to poor visual performance and a higher likelihood of age-related dry eye and other ocular issues.

The researchers concluded that older patients are seeking recommendations from their eye care providers on upgrading contact lenses and dual wear options. The daily problems encountered by contact lens wearers may be addressed by providing additional counselling and instruction.

SOURCE

Naroo SA, Nagra M, Retallic N. Exploring contact lens opportunities for patients above the age of 40 years. *Cont Lens Anterior Eye*. 2022 Apr 12 [Epub ahead of print].

Trends in New Technology Purchases Among Optometrists



Optometrists often rely on their own clinical judgment and experience when making diagnostic assessments, but advances in technology—specifically optical coherence tomography (OCT)—can reveal greater details of the status of the eye. Considering these times of financial uncertainty, optometrists need to be careful when investing in their practices.

Surveying Optometrists

In a recent survey of 276 optometrists, investigators found that OCT topped the list of new medical equipment optometrists are planning to buy in the next year.¹ When deciding whether to upgrade technologies, optometrists tended to focus on patient care, positive impressions, and ease of use. Other priorities included adding practice value and revenue and the device's warranty or service plan.¹

The survey also revealed that two-thirds of respondents found it worthwhile to make new additions to their clinics over the past 2 years (*Figure 1*). Respondents commonly reported purchasing imaging devices, such as OCT and fundus cameras. When optometrists were asked about motivations for investing, the common goals were to:¹

- Improve patient care
- Streamline office flow
- Boost practice revenue

When survey participants were asked if their most recent purchase delivered, results were a mixed bag. About half of respondents noted an increase in clinical outcomes, productivity, and profitability, but many others claimed to see no effect or even small decreases in each of these measures.¹

Improving clinical outcomes was the most influential reason for buying equipment. Tied for second in the rankings were the goals of creating a positive impression on patients and the device's ease of use. Of note, several respondents reported that challenges in hiring and retaining staff affected their equipment purchases.¹

Weighing Costs & Benefits

Given the wide range of procedures that fall under primary eyecare, optometrists have plenty of options to consider pursuing. However, not all new technologies hold the same clinical utility, meaning optometrists must weigh the potential benefits of each tool against their budget. Most respondents already owned the standard battery of primary eyecare equipment, such as slit lamps and manual phoropters. Regarding “wish list” items, about two-thirds of respondents had OCT already, and many other respondents reported being in the market for OCT right now.¹

Although many factors go into device purchasing, the most important is to provide the highest quality care to patients. Many respondents said return on investment, office space, and equipment cost were holding them back from making new purchases. Interestingly, most optometrists preferred to rely on friends and colleagues for advice about new purchases, followed by published articles, optometric opinion leaders, and on-line discussion boards.¹

Have you invested in any new medical technology for your practice in the past 2 years?

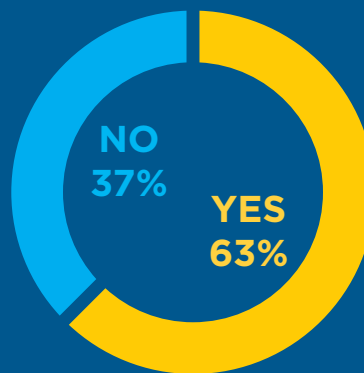


Figure 1

SOURCES:

1. Manthorp C. New technology purchases: how and why ODs buy. *Rev Optometry*. September 15, 2022. Available at: <https://www.reviewofoptometry.com/article/new-technology-purchases-how-and-why-ods-buy>.

The Link Between Food Insecurity & Visual Impairment



A retrospective study of more than 62,000 American adults—all of whom were living below a threshold of 150% of the poverty level—explored the relationship between visual impairment and food insecurity. In total, 16% of patients reported having visual impairment and 28% described circumstances indicating that food insecurity was present.

When compared with those who did not have visual impairment, those with visual impairment had a:

- 216% higher risk of food insecurity overall
- 159% higher risk of marginal food security
- 197% higher risk of low food security
- 295% higher risk of very low food security

The authors noted that some factors were significant in predicting food insecurity, including middle age, non-White race, lower attained education, and lower poverty-income ratio. Helping establish food security for these vulnerable groups is important to reducing the potential burden on patients and the healthcare system.

SOURCE

- Kumar P, Brinson J, Wang J, et al. Self-reported vision impairment and food insecurity in the US: National Health Interview Survey, 2011-2018. *Ophthalmol Epidemiol*. October 6, 2022 [Epub head of print].



Strategies for Managing No-Show Patients



Many experienced optometrists have encountered patients who fail to arrive for their eyecare appointment. National data have demonstrated that no-shows cost the U.S. healthcare system more than \$150 billion each year. Furthermore, recent research has suggested that the average patient no-show rate for optometric practices in the United States is about 25%.¹ Other research has found that seniors are the most likely group of patients to miss appointments. Optometry practices have reported that Mondays are the worst day of the week for missing clinic visits, and September is the month in which practices reported the highest number of missed appointments.²

Considering the high costs associated with missed appointments, efforts are needed to understand how best to address this costly issue. Now that the post-COVID-19 pandemic backlog of patients needing eye care has been met, business is beginning to settle back to normal. However, anecdotal evidence suggests that optometrists are still experiencing no-show rates that range between 15% and 20%.¹

Multiple Reminders

Experts agree that one of the best ways to minimize missed appointments is to reach out to patients at multiple points of contact. For example, sending appointment reminders and confirmation requests through email, text, and phone can help reduce no-shows by ensuring these reminders are being reached via the patient's preferred method of contact.¹

Several reminders should be issued in the week leading up to the patient's exam. If a patient has a conflict, the reminder can serve as a vehicle to reschedule the appointment. An added benefit to this approach is if a patient reschedules, their slot opens back up for another patient.¹

Managing No-Shows

In some practices across the country, optometrists charge patients a no-show fee if they fail to keep their appointment. However, this practice appears to be relatively uncommon unless such a policy was in place prior to the COVID-19 pandemic.¹ If such a fee will be imposed on no-show patients, formalizing the policy can ensure that patients understand the ramifications of their missed appointments.

Another approach to managing no-shows is to change office hours. For example, practices that offer weekend hours might see a spike in missed appointments, especially during the pandemic. Cutting Saturdays and/or Sundays from office hours may alleviate the burden of no-shows for optometrists and their staff. Some optometrists have reported that weekday no-show rates decreased dramatically by eliminating or reducing weekend hours.¹

Some research suggests that clinicians will "fire" patients because of a poor no-show history, but most optometrists agree that such an approach is ineffective and inappropriate. Instead, experts recommend analyzing and tracking the percentage of no-shows in practices to better address these issues in the future.¹

SOURCES:

1. DeLong SK. Managing no-shows: how to handle the missed-appointment headache. *Optometric Management*. June 1, 2022. Available at: <https://www.optometricmanagement.com/issues/2022/june-2022/special-section-corporate-optometry-today-managing>.
2. Valero-Bover D, Gonzalez P, Carot-Sans G, et al. Reducing non-attendance in outpatient appointments: predictive model development, validation, and clinical assessment. *BMC Health Serv Res*. 2022;22(1):451.



Look for These OCT Biomarkers in Wet AMD Conversion



Optometrists need to be aware of clinical signs that indicate advancement of progressive eye diseases like age-related macular degeneration (AMD). A retrospective study has found that several biomarkers on optical coherence tomography (OCT) may signal the conversion to exudative neovascular AMD in patients with intermediate-stage disease.

For the study, 458 patients with intermediate AMD and a minimum of 24 months of follow-up were analyzed, and various OCT biomarkers were assessed at baseline. Results showed that exudation risk increased in the presence of any of the following factors:

- Thick double-layer signs (odds ratio, 4.34)
- Intraretinal hyperreflective foci (odds ratio, 2.34)
- Exudative macular neovascularization (MNV) in the fellow eye (odds ratio, 1.69)

Among the biomarkers, a thick double-layer sign was identified as the strongest predictor, but the authors noted this was only evident in 9.6% of cases at baseline. Researchers noted that a thin double-layer sign was not a risk factor for exudative MNV.

SOURCE

Wakatsuki Y, Hirabayashi K, Yu HJ, et al. Optical coherence tomography biomarkers for conversion to exudative neovascular age-related macular degeneration. *Am J Ophthalmol*. October 10, 2022 [Epub ahead of print].



Cataract Extraction May Reduce Dementia Risk



Dementia affects nearly 50 million people worldwide, but no effective treatments are currently available, highlighting the importance of efforts to reduce risk or delay dementia onset.¹ Visual impairment has been identified as an important risk factor for dementia.² Cataracts affect more than 35 million people globally and cause blindness in approximately 20 million people. Importantly, cataracts affect most older adults who are at high risk for dementia.²

Taking a Closer Look

Recent analyses have shown conflicting results regarding the impact of cataract extraction on cognitive impairment or dementia.² To address this research gap, researchers had a study published in JAMA Internal Medicine that sought to determine whether cataract extraction is associated with reduced risk of dementia among older adults.

The prospective analysis reviewed data from the Adult Changes in Thought study, an ongoing, population-based cohort of randomly selected, cognitively normal members of Kaiser Permanente Washington. Study participants were aged 65 years and older and free of dementia at enrollment. Participants were followed biennially until incident dementia occurred. Only participants with a diagnosis of cataracts or glaucoma before enrollment or during follow-up were included in the study.²

Summarizing Key Findings

The study included 3,038 participants in total, 1,800 of which were women and 1,238 were men. Based on 23,554 person-years of follow-up, the authors found that cataract extraction was associated with significantly reduced risk of dementia when compared with participants who did not receive surgery, with a hazard ratio of 0.71. These findings persisted after controlling for years of education, White race, and smoking history and after stratifying participants by apolipoprotein E genotype, sex, and age group at cataract diagnosis. The authors noted that similar results were seen in marginal structural models after they adjusted for an extensive list of potential confounders.²

In contrast to cataract extraction, the research team did not find lower risks with glaucoma surgery among people with the eye condition. Glaucoma surgery did not have a significant association with dementia risk, with a reported hazard ratio of 1.08. Similar results were found with the development of Alzheimer's disease dementia.²

Exploring the Implications

Based on the findings, cataract extraction could have a protective association for older patients who undergo cataract surgery. The investigators noted that their findings were consistent with a cataract extraction-specific association with dementia risk, potentially because of improvements in vision and visual function.² The results have implications for the care of older people at higher risk for both impaired vision due to cataracts and impaired cognition due to neurodegeneration that was observed in age-related dementia.²

The researchers reported that improvements in quality of life resulting from cataract extraction for patients and their families are likely considerable. They added that future studies are needed to explore the mechanisms by which cataract extraction may affect dementia risk.²

SOURCE:

1. Livingston G, Huntley J, Sommerlad A, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *Lancet*. 2020;396(10248):413-446.

2. Lee CS, Gibbons LE, Lee AY, et al. Association between cataract extraction and development of dementia. *JAMA Intern Med*. 2022;182(2):134-141. Available at: <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2786583>.



Study: Ortho-K Discomfort Usually Resolves Within 1 Year



A study assessing risk factors associated with ocular discomfort and ocular surface changes in orthokeratology (ortho-K) has found that lens wear increased symptoms of discomfort and decreased functionality of the tear film, usually within 3 months of use. Although tear-related visual function parameters correlated with ocular discomfort, the researchers reported that baseline levels were reached again after 12 months.

The study, which included 50 patients who received ortho-K, specifically looked at the ocular surface disease index (OSDI), slit lamp examination, Keratograph 5M, optical quality analysis, and corneal staining. Overall, OSDI scores and scores on ocular symptoms and vision-related function tests significantly increased at the 3-month visit but then decreased to levels close to baseline at the 12-month visit. The authors concluded that more precise assessments of optical quality alterations and their impact on vision quality is important for patients receiving ortho-K.

SOURCE

Xie C, Wei R. Long-term changes in the ocular surface during orthokeratology lens wear and their correlations with ocular discomfort symptoms. *Cont Lens Anterior Eye*. September 20, 2022 [Epub ahead of print].

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*Based on in vitro measurements of unworn lenses.

**Based on in vitro studies on unworn lenses.

†Based on lens movement, centration, and rotation at initial fitting.

References: 1. In a clinical trial to evaluate on-eye performance of TOTAL30® for Astigmatism lenses where n=69; Alcon data on file, 2021. 2. Based on a clinical trial where n=18; Alcon data on file, 2021. 3. In vitro analysis of lens oxygen permeability, water content, and surface imaging; Alcon data on file, 2021. 4. In vitro analysis of leghfilcon A contact lenses outermost surface softness and correlation with water content; Alcon data on file, 2021. 5. In vitro evaluation of bacterial adherence in commercial lenses; Alcon data on file, 2020. 6. In vitro evaluation of bacterial biofilm in commercial lenses; Alcon data on file, 2020. 7. Ishihara K, Fukazawa K, Sharma V, Liang S, et al. Antifouling silicone hydrogel contact lenses with a bioinspired 2-methacryloyloxyethyl phosphorylcholine polymer surface. *ACS Omega*. 2021;6:7058-7067. 8. In vitro evaluation of lipid deposition for leghfilcon A and commercial lenses using 3D confocal imaging; Alcon data on file, 2021.

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New Factors Contribute to Keratoconus Development or Progression



Keratoconus

Several factors associated with the development or progression of keratoconus have been established in previous research, but a new prospective study aimed to identify additional risk factors. After reviewing data from patient-completed questionnaires, researchers found significant associations between keratoconus and a family history, eye rubbing, allergies of any kind, smoking history, and dry eye disease. The authors also found a positive correlation between disease severity and extent of eye rubbing as well as night-time pressure due to sleep position.

The study team advised practitioners to pay closer attention sleep position, one of the novel factors identified in the investigation. They recommend that all patients be systematically screened for inappropriate sleeping positions to identify the use of night-time eye protection, if necessary. In addition, efforts are needed to help people stop eye rubbing to reduce risks of disease worsening.

SOURCE

Debourdeau E, Planells G, Chamard C, et al. New keratoconus risk factors: a cross-sectional case-control study. *J Ophthalmol*. September 28, 2022 [Epub ahead of print].



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