Open-Globe Injury Repairs and Outcomes Vary by Population
August 2023

Studies on open-globe injuries have been conducted mostly in small populations. To fully assess the impact of open-globe injuries in the United States, Tomaiuolo et al. reviewed data from the nationwide IRIS Registry to evaluate five-year incidence rates of open-globe injury repair (OGR) surgery and demographic factors related to OGR incidence, and found that OGR rates were highest in men, Black and Hispanic patients, and patients aged 21 to 40 years.

As of July 2022, the IRIS Registry contained deidentified information from more than 75 million patients, encompassing more than 454 million patient visits to ophthalmologists. For this study, 2014-2018 data were analyzed. VA was measured during at least one follow-up visit between three months and one year post-OGR. Demographic covariates were sex, race/ethnicity, age, and geographic region. Clinical covariates were VA at presentation, presence of concurrent surgeries at the time of the OGR, and any surgical procedures in the 12 months after OGR. Risk of legal blindness or visual impairment one year after OGR was also studied.

The five-year cumulative OGR incidence rate was 28 per 100,000 patients, with rates being highest for men (44.5 per 100,000), patients aged 21-40 years (44.6 per 100,000), and Black and Hispanic populations (39.5 and 49.3 per 100,000, respectively). One year after OGR, the proportion of eyes with legal blindness had decreased from 53% to 35% and the proportion of eyes with visual impairment had decreased from 71% to 53%; overall, VA improved by 0.37 logMAR. Risk factors for continuing legal blindness or visual impairment after OGR included VA of 20/200 or worse at presentation (odds ratio [OR], 11.18–34.29), age >80 years (OR, 5.84), additional surgeries after OGR (OR, 1.99), and Black race (OR, 1.87).

These findings indicate that OGR risk and poor visual outcomes after OGR vary considerably among different populations, and “may offer guidance for targeting measures to prevent [open-globe injuries] and associated vision loss,” according to the authors.

—Summary by Stephanie Leveene, ELS

Sight-Threatening Eye Disease and the Risk of Suicide
August 2023

Sight-threatening eye disease (STED) is often associated with psychological stress and a lower quality of life. Ha et al. explored the potential relationship between STED and suicide mortality. They found that any STED diagnosis correlates with increased risk of death by suicide.

This cohort study included nearly 2.9 million individuals (24,300,969 person-years) aged 40 years or older in the Korean National Health Insurance database between January 2010 and December 2020. The incidence rate ratio (IRR) of suicide was compared between patients diagnosed with at least one major STED—exudative age-related macular degeneration (AMD), diabetic retinopathy, or glaucoma—and controls with no STED diagnosis.

In total, 13,205 suicide deaths were reported. Thirty-four percent of these individuals had at least one STED, which amounted to a significantly higher suicide rate for patients with STED than for controls (69 vs. 51 per 100,000 person-years, respectively). Diabetic retinopathy correlated with the most suicide deaths (57%), followed by glaucoma (48%) and exudative AMD (9%). Being diagnosed with multiple STEDs rather than a single STED increased patients’ risk for suicide (IRR, 1.48 vs. 1.31), as did the coexistence of severe visual impairment (IRR, 1.49).

In general, suicide rates were highest during the first six months after diagnosis. The authors suggest that this may be due to initial fears associated with being diagnosed with a progressive, debilitating disease.
These results provide evidence for the potential psychological impact of a STED diagnosis beyond what may be associated with the disease burden itself, the authors concluded. They suggest that ophthalmologists be aware of the potentially greater risk of suicide among patients diagnosed with STED and propose that these patients could benefit from more comprehensive care, especially during the six months following diagnosis. Research into the underlying mechanisms for these correlations could build on this study, said the authors, and help inform public health policies.

—Summary by Lauren Jarem, MS

Blindness From Corneal Opacity: Regional Demographic Differences August 2023

Corneal opacity (CO) is one of the top five causes of blindness. Wang et al. investigated the incidence of global blindness and moderate-to-severe vision impairment (MSVI) from trachomatous and nontrachomatous CO for the period 1984-2020. They found overall declining rates of blindness from trachomatous CO, but higher rates of trachomatous CO for women and people of older ages, and significantly higher rates of trachomatous CO and MSVI in the Africa/Middle East region in comparison to other areas.

Data from the Global Burden of Disease Vision Loss Expert Group and an independent literature review conducted by the authors were used to estimate CO differences by age, sex, and regions across four outcomes: blindness/trachomatous CO, MSVI/trachomatous CO, blindness/nontrachomatous CO, and MSVI/nontrachomatous CO. Almost 2 million people were represented in the included 244 studies, which had population-based surveys of individuals ≥40 years old. Age-specific estimates were based on 2015 United Nations standard populations. Univariable and multivariable Poisson log-linear models were applied for analysis of time trends and analysis of age, sex, and region, respectively.

Results indicated a long-term reduction in the rates of global blindness and vision impairment from trachomatous CO, though not from other causes of CO. Relative to males, females had a higher rate of trachomatous CO, with rate ratio estimates of 2.5 for MSVI and 3.5 for blindness. In people ≥50 years of age, the rate of blindness due to trachomatous CO was 0.094%. The most significant regional difference was higher rates of both trachomatous CO and MSVI in Africa (up to 14 times higher than in all included regions combined). The lowest rates of blindness or MSVI from nontrachomatous CO occurred in Latin America/Caribbean and Europe.

The authors attribute the decline in trachomatous CO to the success of the trachoma elimination program and socioeconomic development. Still, the burden of vision loss secondary to CO remains high, with approximately 5.5 million individuals having bilateral blindness or MSVI and 6.2 million having unilateral blindness.

—Summary by Kathleen Erickson, MLS

Ophthalmology Glaucoma

Selected by Henry D. Jampel, MD, MHS

Cost-Utility Analysis of Intervention to Improve Glaucoma Treatment Adherence July/August 2023

In a study of U.S. veterans with confirmed or suspected glaucoma, Hung et al. compared cost utility between standard of care and an intervention designed to improve adherence to topical medication. They found that the intervention increased quality-adjusted life years (QALYs) and reduced payer costs.

The study included 200 patients who were assigned randomly to the intervention or control group. All participants had visual field assessment in the preceding nine months and reported poor adherence to treatment. The intervention consisted of an ophthalmic technician: 1) engaging the participant in a discussion about glaucoma, 2) addressing participant-specific barriers to adherence, 3) observing the technique of eyedrop administration and recommending drop aids if needed, and 4) providing a written dosing schedule. The intervention group also received a smart medication bottle equipped with a reminder alert that sounded or flashed within two hours of a delayed dose. The control group viewed a slide presentation on general eye health that did not focus specifically on glaucoma. They too were given a smart bottle but without the reminder function.

The researchers developed a decision analytic model that would simulate life-long costs and QALYs associated with each type of care. Costs included direct medical expenses incurred by the VA payer. Health-related quality of life was estimated from published utility values. Analyzed scenarios included the addition of booster interventions, a 3% annual decline in the probability of staying adherent, and both situations combined.

Although the intervention required extra costs up front, the lifetime costs were lower ($23,339.28 vs. $23,504.02) and QALYs were higher (11.62 vs. 11.58) for the intervention group. Relative to standard care, the incremental cost-effectiveness ratio (ICER) with the intervention was $3,278/QALY. Assuming a 3% annual reduction in the odds of maintaining adherence in conjunction with the intervention, the ICER was $71,371/QALY.

The authors noted that the mean age of their study population was 67 years. With younger patients, “it is likely that we would have seen even larger differences in the costs saved and QALYs gained” from the intervention. They encourage research to compare cost utility for patients with fast- and slow-progressing glaucoma.

—Summary by Lynda Seminara

Ophthalmology Retina

Selected by Andrew P. Schachat, MD

Optimal Timing of Follow-Up After PVD Detection August 2023

Posterior vitreous detachment (PVD) requires timely follow-up to check for retinal pathology. Vangipuram et al. gathered data from the IRIS Registry and documented the intervals from...
PVD detection to a retinal break or detachment. Overall, the median time was six weeks to a retinal break and roughly another week to retinal detachment. The time frames were shorter for high-risk eyes.

Eligible for the analysis were patients with acute PVD who had undergone extended ophthalmoscopy. Data collected at the initial visit included VA, lens status, and the presence/absence of vitreous hemorrhage, myopia, and lattice degeneration. Also documented was the specialty of the treating physician.

Altogether, 434,046 eyes met the inclusion criteria, 10,518 (2.42%) of which had a retinal break or detachment after the PVD diagnosis. The overall median time to a delayed/missed retinal break or detachment was 42 and 51 days, respectively. The median time to a delayed retinal break or detachment was 42 and 49 days (respectively) in eyes examined by a retina specialist versus 37 and 55 days (respectively) in eyes examined by other physicians. The eyes at greatest risk for either retinal condition had vitreous hemorrhage (hazard ratio [HR], 9.30), a previous retinal break or detachment in the fellow eye (HR, 3.91), lattice degeneration (HR, 2.61), or myopia (HR, 1.42). For eyes with at least one of the above-mentioned risk factors, the median time to a retinal break or detachment was 34 and 39 days, respectively. Among eyes with vitreous hemorrhage and no other risk factors, the median time to a retinal break was 14 days.

The authors concluded that patients should be examined at least once in the six weeks following PVD detection; they recommend earlier follow-up (within one month) for patients at high risk of retinal pathology.

—Summary by Lynda Seminara

**Ophthalmology Science**
Selected by Emily Y. Chew, MD

**Association of Age With DED Signs and Symptoms**
June 2023

Whether and how aging may affect the signs and symptoms of dry eye disease (DED) is a subject of uncertainty. In a secondary analysis of the multicenter Dry Eye Assessment and Management (DREAM) study, Zhao et al. explored possible links between aging and the signs or symptoms of DED. Their goal was to gain insight into clinically relevant age differences in signs or symptoms. They found that advanced age coincides with more severe DED signs but is unrelated to DED symptoms.

In the DREAM study, participants with DED underwent assessment of their signs and symptoms at baseline and after six and 12 months of daily oral omega-3 supplementation, which did not have an effect on DED. Most patients were at least 50 years old. Evaluations included tear breakup time (TBUT), tear osmolarity, ocular surface disease index (OSDI), corneal staining score, Schirmer test with anesthesia, Brief Pain Inventory (BPI), and others. Multivariable generalized linear regression models were applied to compare DED symptoms and signs by age and sex. Main outcome measures were individual signs, DED symptom scores, and composite scores of DED signs.

Among the 535 study participants, increasing age was significantly associated with worse TBUT (p = .01), higher corneal staining scores (p < .001), greater composite severity score for signs (p = .007), and higher tear osmolarity (p = .001). Similar significant differences in these parameters were found for women in each age group (all p < .05) but not for men. In adjusted and unadjusted analyses, there were no significant age-group differences in OSDI or BPI symptom scores; worsening symptoms did not correlate with increasing age. In race- and sex-adjusted analyses, the oldest age group had the most severe signs, including low TBUT, low Schirmer test scores, high corneal staining scores, and poor meibomian gland function. Similarly, composite severity scores for DED signs were higher for older participants.

“Although this secondary analysis of the DREAM study data has provided greater insight regarding DED associations with age,” said the authors, they acknowledged that the results would not necessarily apply to patients with mild DED, who were not eligible to participate in the DREAM trial. The authors noted that many questions relating to the pathophysiology of these findings remain unanswered.

—Summary by Lynda Seminara

**American Journal of Ophthalmology**
Selected by Richard K. Parrish II, MD

**Visual Outcomes of Immediate Versus Delayed Glaucoma Treatment**
August 2023

In the Early Manifest Glaucoma Trial (EMGT), a randomized study launched in the mid-1990s, progression rates were compared for immediate and delayed treatment. Data collected through 2013 indicated that prompt treatment reduced the progression risk substantially. Heijl et al. recently revisited data from this trial to explore long-term visual outcomes. They found no significant difference in the rates of serious visual impairment (VI) or blindness between immediate and delayed treatment, but visual field (VF) damage was worse if treatment was postponed.

The EMGT included patients ≥50 years of age with newly detected, untreated glaucoma in at least one eye. They were assigned randomly to receive immediate treatment (topical betaxolol plus argon laser trabeculoplasty; n = 128) or observation (no treatment if the glaucoma remained stable; n = 123). Follow-up assessments included standard automated perimetry, VA measurements, and tonometry. Main outcomes for the visual analysis were VI, VA, rate of progression, and the perimeter mean deviation (MD) index.

The mean follow-up times were 13.7 years for patients with immediate treatment and 14.8 years for those with initial observation. The rates of VI or blindness attributed to glaucoma were similar for the two groups (12.1% vs. 11.0% and 9.4% vs. 6.1%, respectively). The cumulative incidence of VI in at least one eye was slightly higher among those treated immediately, but the between-group difference in VA from
baseline to the last follow-up visit was insignificant. Although baseline MD values were worse for those with immediate treatment, these patients ultimately had less VF loss in their worse eye (−12.85 dB vs. −14.73 dB) and a lower rate of progression (−0.60 dB/year vs. −0.74 dB/year).

These findings suggest that delaying glaucoma treatment does not significantly raise the risk of blindness or severe VI. However, the authors emphasized the importance of frequent follow-up, especially because treatment delays may result in greater VF damage.

ROP Outcomes for Neonates Having Just One Screening Criterion

August 2023

The guidelines for determining if and when eyes should be screened for retinopathy of prematurity (ROP) are based on old data. In light of this fact and concerns about potential over-screening, Patel et al. reviewed medical records for more than 1,600 infants who met just one or neither criterion for screening. Among those with a single criterion, the rate of ROP was low, and no case progressed to high-risk disease or required treatment. These findings led the authors to suggest a different algorithm for this low-risk population, which is designed to reduce unnecessary ROP screening while ensuring patient safety.

The review was conducted at a neonatal intensive care unit and represented 10 years of recent experience. The main outcome measures were any ROP and treatment-warranted ROP. Included in the analyses were neonates who met one of these sets of birth weight (BW) and gestational age (GA) criteria: BW <1,500 g and GA ≥30 weeks (group 1), BW ≥1,500 g and GA <30 weeks (group 2), or BW ≥1,500 g and GA ≥30 weeks (group 3). This stratification was designed to capture cases that had only one screening criterion (groups 1 and 2) or neither criterion (group 3).

Among more than 9,000 neonates screened for ROP by the same pediatric retina specialist, 7,520 had documentation of BW and GA; 1,612 (21.4%) of these could be classified into one of the designated groups. Groups 1, 2, and 3 included 466, 23, and 1,123 neonates, respectively. The corresponding numbers of ROP diagnoses were 20 (4.29%), 1 (4.35%), and 12 (1.07%). The mean time from birth to ROP diagnosis was 36.25 days in group 1, 47 days in group 2, and 23.33 days in group 3. The BW and GA of cases that progressed to ROP were lower than the combined tri-group averages. There were no instances of stage 3, zone 1, or plus disease, and no patient required treatment.

In light of these results, the authors proposed a new algorithm (“TWO-ROP”) that would safely decrease the burden of inpatient screening. According to TWO-ROP, neonates who do not meet both traditional criteria, and do not have any major risk factor for ROP, would be considered for outpatient examination within one week of discharge or at 40 weeks (GA equivalent) if they remained hospitalized. The current ROP screening guidance would still apply to neonates who meet both criteria, said the authors. They recommend evaluating the TWO-ROP protocol in external settings.

—Summaries by Lynda Seminara

JAMA Ophthalmology
Selected and reviewed by Neil M. Bressler, MD, and Deputy Editors

Cost Comparison of FLACS and Traditional Cataract Surgery
July 2023

Although the efficacy and safety of femtosecond laser–assisted cataract surgery (FLACS) have been well documented, less is known about the long-term cost-effectiveness of this procedure, which would be a key factor in decision-making. This subject was explored by Bénard et al. to fulfill a planned secondary objective of the Economic Evaluation of Femtosecond Laser Assisted Cataract Surgery (FEMCAT) trial. They found that, during a 12-month period, FLACS was inferior to phacoemulsification from a cost perspective. At the cost-effectiveness threshold of €30,000 ($32,973) per quality-adjusted life-year (QALY), the probability of FLACS being cost-effective was 15.7%.

All FLACS procedures in the FEMCAT trial were performed using the Catalys precision system. Participants were treated in one of five ambulatory surgery centers of university hospitals in France. The main outcomes were utility (measured by the Health Utility Index questionnaire) and costs (estimated by micro-costing). Inpatient and outpatient costs were gathered from the French National Health Data System. The investigators also performed a value-of-information analysis, in which they estimated the expected value of perfect information (EVPI), which refers to the opportunity cost of being wrong when deciding 1) to reimburse an intervention that appears cost-effective or 2) to not reimburse an intervention that does not appear cost-effective.

The study cohort included 870 patients who underwent cataract surgery; nearly two-thirds were bilateral cases. Surgery-related costs and overall 12-month total costs were lower for phacoemulsification; the difference in mean costs was €545.9 ($600). The incremental cost-effectiveness ratio (ICER) was −€136,476 (−$150,000) per QALY. Hence, the ICER of FLACS was not within the often-cited effectiveness range of $50,000 to $100,000 per QALY. With an acceptability threshold of €30,000 ($32,973) per QALY, the probability of FLACS being cost-effective would be less than 16%. At this reduced threshold, the EVPI would be €246,139,079 ($270,530,231).

The authors believe that FLACS in its current state of development is not cost-effective and thus “should not be reimbursed by health care systems.” They noted that refinements such as a more efficient laser could make FLACS more valuable in the future. (Also see related commentary by Oliver D. Schein, MD, MPH, in the same issue.)

Diagnostic Parameters for Glaucoma in Highly Myopic Eyes
July 2023

Identifying glaucoma in the presence of high myopia can be challenging. In a retrospective cross-sectional study,
Jeong et al. assessed the diagnostic accuracy of individual OCT parameters, the University of North Carolina (UNC) OCT Index, and the temporal raphe sign. In their study, the single most useful diagnostic marker was thickness of the ganglion cell inner plexiform layer (GCIPL).

For this work, eight years of experience at a hospital in South Korea were reviewed. The study included patients with glaucoma in addition to high myopia (defined as axial length at least 26.0 mm or spherical equivalent of −6 D or lower), as well as patients with high myopia but not glaucoma. Known markers of glaucoma were tested for diagnostic utility in the study population; these included GCIPL thickness, peripapillary retinal nerve fiber layer (RNFL) thickness, optic nerve head parameters, UNC OCT scores, and temporal raphe sign status. Decision-tree analysis was conducted and included each OCT parameter, the UNC OCT Index, and the temporal raphe sign. The main outcome measure was area under the receiver–operating characteristic curve (AUROC) for each parameter.

Overall, 132 patients had high myopia plus glaucoma, and 142 had high myopia alone; the mean age of both groups was 50 years. The OCT parameter with the greatest diagnostic accuracy was inferotemporal GCIPL thickness (AUROC, 0.951). The AUROC of the UNC OCT Index was 0.891, and the AUROC for temporal raphe sign positivity was 0.922. Although the decision-tree analysis included all 16 OCT parameters, as well as the UNC OCT Index and temporal raphe sign, the only reliable decision nodes were temporal raphe sign, inferior RNFL thickness, and superotemporal GCIPL thickness. Therefore, observed structural changes are most likely to be glaucomatous if the temporal raphe sign is positive and the inferior RNFL thickness is ≤90 μm. Conversely, such changes are unlikely glaucomatous if the temporal raphe sign is negative and the superotemporal GCIPL thickness is >65 μm.

Given these findings, the authors surmised that “combining the temporal raphe sign with single OCT parameters may further enhance diagnostic utility.” They emphasized that the UNC OCT Index may need adjustments to be useful in the setting of high myopia. (Also see related commentary by Sanjay Asrani, MD, and Atalie C. Thompson, MD, MPH, in the same issue.)

**Efficacy and Safety of SB15 for Neovascular AMD**

_Biosimilar drugs can expand the treatment options for retinal diseases. SB15, an aflibercept (AFL) biosimilar, is produced by recombinant DNA technology in ovary cells of Chinese hamsters. To achieve regulatory approval, a biosimilar agent must resemble the reference product in effectiveness as well as structure, function, immunogenicity, safety, animal toxicity, and human pharmacokinetics/pharmacodynamics._

In a phase 3 randomized study of more than 400 patients, Woo et al. compared efficacy and safety for SB15 and AFL in the treatment of neovascular age-related macular degeneration (nAMD). They found that changes in BCVA from baseline to week 8 were nearly identical with these drugs. The incidence of treatment-emergent adverse events (TEAEs), including effects in the study eyes, also was similar.

This double-masked, parallel-group trial was conducted among 56 centers and 10 countries during a two-year period. Eligible candidates were at least 50 years old and had treatment-naïve nAMD. Key exclusion criteria were fibrosis, atrophy, hemorrhage, or considerable scarring. Enrollees were assigned randomly to receive 2 mg of either SB15 or AFL at four-week intervals for the first 12 weeks (three injections each), followed by treatment at eight-week intervals through week 48. At week 32, participants were rerandomized to continue their present treatment or switch from AFL to SB15. The present study focused on findings through week 32. The main outcome measure was BCVA change from baseline to week 8. Other key end points were changes in BCVA and central subfield thickness from baseline to week 32, as well as safety, pharmacokinetics, and immunogenicity.

Overall, 224 patients were started on SB15 and 225 on AFL; 438 patients (97.6%) continued through the week-32 evaluation. The mean age of the entire study population was 74 years. Baseline demographics and most disease characteristics were comparable for the two groups. The least-squares (LS) mean change in BCVA from baseline to week 8 in the SB15 group (6.7 letters) was almost identical to that in the AFL group (6.6 letters). Treatment efficacy remained similar through 32 weeks, with LS mean BCVA changes from baseline of 7.6 letters with SB15 and 6.5 letters with AFL, and with central subfield thickness decreasing by 110.4 μm and 115.7 μm, respectively. There were no clinically meaningful differences in the incidence of TEAEs, including ocular events in the study eye. Moreover, serum concentration profiles and the cumulative incidence of overall antidrug antibody positivity were comparable.

The authors concluded that their findings “support the establishment of biosimilarity between SB15 and AFL.”

—Summaries by Lynda Seminara

**Other Journals**

Selected by Prem S. Subramanian, MD, PhD

**The Cost Surgeons Pay to Train Residents in Cataract Surgery**

_Clinical Ophthalmology_ 2023;17:1433-1438

The costs associated with teaching eye surgery in the OR setting have not been established. Tsou et al. aimed to estimate the “opportunity cost” incurred by attending surgeons who help residents learn to perform cataract surgery. Their review of more than 8,800 cases showed that the cost to attending surgeons is considerable. When a resident was present for the procedure, operating time was significantly longer during all quarters of the academic calendar year.

For this research, the investigators reviewed OR records from a teaching hospital for a four-year period. Cases were identified by CPT codes for cat-
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Feature

IOLs  Take a look at four complicated cataract cases. How would you handle them? Then see what your colleagues say.

Clinical Update

Uveitis  Evaluating and managing noninfectious uveitis can be complex. Aiming to clarify, Part 1 of a roundtable focuses on initiating treatment.

Vision Rehabilitation

There is much you can do to help patients with low vision.

Pearls

Cornea  Understanding and managing Sjögren syndrome. It’s not just dry eye.

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aract surgery (66982 and 66984). The academic year was split into quarters to allow for evaluation by residents’ level of education. Quarters 1 through 4 were defined, respectively, as July-September, October-December, January-March, and April-June. The generic 2021 Medicare Conversion Factor was applied to analyze costs. The main outcome measures were operating time and work-relative value units (wRVUs). The latter represents a composite of the time, skill, mental effort, judgment, and stress required or experienced by attending surgeons.

Among 8,813 cases of cataract surgery, 2,906 (33%) included a resident in the OR. Among cases represented by CPT code 66982, the median (interquartile range [IQR]) operating time was 47 (22) minutes with a resident and 28 (18) minutes without a resident (p < .001). For cases coded to CPT 66984, the respective operating times were 34 (15) minutes and 20 (11) minutes (p < .001). The median wRVU was 78.5 (20.9) in the presence of a resident versus 61.0 (14.4) in the absence of a resident (p < .001). This additional time incurred translates to a per-case opportunity cost of $1,393.72 (IQR, $1,055.63). When a resident was present, operating times were significantly longer in every academic quarter and were longest during the first quarter.

In busy environments where faculty have clinical and research responsibilities in addition to teaching duties, it is important to continue supporting educational efforts, said the authors. Given the pressure on faculty to generate revenue from clinical activities, the authors emphasized the need for novel approaches to resident training that would minimize costs and provide metrics to test the effectiveness of such strategies.

Factors Linked to Missed Medical Appointments

British Journal of Ophthalmology
Published online May 22, 2023

There is mounting evidence that telemedicine may be intensifying health care disparities, but little is known about the rates of missed ophthalmic appointments or the demographic factors linked to nonattendance. Wagner et al. investigated these matters and found that nonattendance at audiovisual appointments was associated with male sex, low socioeconomic status, and previously missed appointments.

This retrospective observational study included patients who registered at a tertiary-care ophthalmic facility in the United Kingdom during a three-year period (ending October 2021). Variables used in logistic regression analyses included sociodemographic, clinical, and operational factors. Five models of care delivery were studied: asynchronous, synchronous telephone, synchronous audiovisual, and face-to-face contact both before and during the COVID-19 pandemic.

Altogether, data were analyzed for 85,924 patients; the median age was 55 years, and 54.4% were female. Nonattendance rates varied by delivery mode and time period. Face-to-face appointments were missed by 9% of patients before the pandemic and by 10.5% during the pandemic. No-show rates for the asynchronous, synchronous telephone, and synchronous audiovisual models were 11.7%, 9.8%, and 7.1%, respectively. Regardless of the care delivery method, nonattendance was highest for men, patients of low sociodemographic status, those with a previously canceled appointment, and those with undocumented race/ethnicity. The patients who did not disclose their race/ethnicity were more deprived socioeconomically, had inadequate access to broadband service, and were more likely to have diabetes mellitus. In regard to audiovisual appointments, the attendance rates were lowest for Black patients.

Many of these findings echo results of studies in other medical specialties. “Even within health care systems free at the point of service, socioeconomic deprivation is a major challenge to engagement with digital transformation of services,” said the authors. In addition to addressing this matter, they recommend studying and comparing the visual outcomes associated with telehealth and in-person models of care. —Summaries by Lynda Seminara