

# WHAT ARE THE TRUE COSTS OF REFRACTIVE CATARACT SURGERY?



Do premium IOL patients require more postoperative care than conventional IOL patients?

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Cataract surgery has evolved into a refractive procedure with visual outcomes almost comparable to those of LASIK. The expectations of patients and surgeons have steadily risen as technology has improved. Providers have dedicated parts of their budgets to the purchase and maintenance of increasingly sophisticated equipment such as femtosecond lasers; topographic and tomographic devices; intraoperative aberrometers; diagnostic units; technology to control or eradicate ocular surface disease before cataract surgery; and IOLs designed to address presbyopia, astigmatism, and various optical aberrations.

Of course, not all cataract surgeons offer premium lens options. Currently, the percentage of US cataract surgery patients who receive toric or presbyopia-correcting IOLs is only 10% and 8%, respectively.<sup>1</sup> In the 2018 ASCRS Annual Clinical Survey of practice patterns, 60% of respondents said they do not perform laser cataract surgery, and their primary reason was financial. When asked why they did not implant more premium lenses, survey respondents listed potential visual side effects and technological limitations as the primary reasons, indicating a lack of confidence in currently available technology.<sup>1</sup>

Offering the latest in refractive cataract surgery comes at a cost. In addition to capital investment in laser

and IOL technology, there is the price of diagnostic and measurement devices. More chair time is required before and after surgery. Additional personnel, such as surgical counselors and patient coordinators, must be hired. Practice flow and logistics must change, often reducing efficiency, at least initially.

The advanced technology, excellent outcomes, and concierge service increase costs for patients as well. In the United States, Medicare and other insurance carriers reimburse these procedures as if they were standard cataract surgery with a conventional IOL, but CMS Ruling 05-01 for presbyopia-correcting IOLs and CMS Ruling 1536R for astigmatism-correcting IOLs allow patients to be charged for services that physicians and facilities would not otherwise provide in connection with the implantation of a conventional IOL. Although there is variation among practices, most perform additional diagnostic services for these patients to enhance the likelihood of a successful refractive result. Additionally, many physicians have extended the global period for postoperative care from 90 to 180 days or, in some cases, 1 year, during which time patients may be seen at no additional charge for care relating to surgery.

To the best of our knowledge, there is no professionally recognized guidance on the additional services often required by premium IOL

patients. Developing such a protocol might be of real value. To this end, we decided to analyze one component of the refractive cataract package in particular: the additional time spent with patients receiving premium versus conventional IOLs.

## BACKGROUND ON THE PILOT STUDY

When designing our study, we realized that our analysis would depend on the extent to which practices maintain comprehensive data on their patients, not only in terms of the number of postoperative visits but also the time spent during these visits. We also recognized that there are several different models of care in cataract surgery: private, including a solo practitioner or multiple providers; academic; hospital-based; and private equity-established platforms. Finally, we took into account that some providers directly manage their patients' postoperative care, whereas others collaborate with optometrists.

For the sake of simplicity, we limited our data collection to patients who were seen within the practice of the operating surgeon for the postoperative period. Because the number of variables can complicate analysis, we decided to begin with a limited pilot study comprising a private practice and an academic practice to determine if we could achieve meaningful results in two different practice settings.

**“IN ADDITION TO CAPITAL INVESTMENT IN LASER AND IOL TECHNOLOGY, THERE IS THE PRICE OF DIAGNOSTIC AND MEASUREMENT DEVICES. MORE CHAIR TIME IS REQUIRED BEFORE AND AFTER SURGERY. ADDITIONAL PERSONNEL ... MUST BE HIRED.”**

### METHODOLOGY

Because no relevant data are reported in the scientific peer-reviewed or nonpeer-reviewed literature, we retrospectively reviewed the charts of a group of tightly selected traditional and premium cataract surgery patients at two different practice settings: a private practice (Discover Vision Centers, Kansas City, Missouri) and an academic hospital-based setting without collaborative care (Bascom Palmer Eye Institute, Miami and Plantation, Florida). Patients were compared within a practice setting and not between sites because practice formats were not comparable.

Patients were excluded if they had any ophthalmic diagnosis other than cataract; they had a history of prior ocular surgery (including corneal refractive surgery), trauma, or glaucoma; they were taking any ophthalmic medication unrelated to cataract surgery; they did not have 20/20 visual potential; they did not have fully dilating pupils (no use of pupillary dilation device); they required trypan blue dye for anterior capsular staining (no mature cataracts); or they had any intraoperative complications.

At least 1 year of follow-up after surgery was recorded in all cases. We took note of demographic information, IOL model, number of visits per year, and number of minutes from check-in to check-out time. Any refractive enhancements and the reason for each visit also were recorded.

### RESULTS

#### ► Setting No. 1: Private Practice

This study group comprised 20 patients who underwent standard cataract surgery and 20 patients who received premium cataract surgery. The premium patients had 67% more total appointments in the first year after surgery, with 40% more appointments in the first 90 postoperative days. The provider spent 13% more time (in minutes) per visit with premium patients, accounting for 47% more time (in minutes) total during the first postoperative year.

#### ► Setting No. 2: Academic Hospital-Based Practice

This study group also comprised 20 patients who underwent standard cataract surgery and 20 patients who received premium cataract surgery. Patients were slightly younger in the premium cataract surgery group (72.35 vs 75.9 years of age). Excluding the routine follow-up examination 1 year after surgery, the premium group had more postoperative appointments than the standard group (5.5 vs 4.8). This translated to 13.9% more visits in the first year after surgery for premium patients. The provider spent 30.5% more time (in minutes) with premium patients during the first postoperative year.

### OVERVIEW

In both practice settings, premium patients had more visits and spent more time in the physician's office

during the first 90 days and the first year after surgery. The most common reason for an additional postoperative visit was posterior capsular opacification necessitating an Nd:YAG laser capsulotomy. Other reasons for longer office visits included treatment of ocular surface disease and discussion of glare, halos, or other issues related to quality of vision (including but not limited to residual refractive error).

Appointment times were substantially longer in the academic hospital-based setting, but the trends were similar in both practice settings.

### CONCLUSION

As cataract surgery technology and procedures continue to evolve, it becomes increasingly important for surgeons, practice administrators, patients, insurers, and industry to recognize the additional costs involved—financial and otherwise—and to reevaluate reimbursement accordingly. Future investigations may include a comparative assessment of the preoperative consultation and the preoperative measurements required to prepare patients for premium versus traditional cataract surgery. ■

1. ASCRS Clinical Survey 2018. *Eyeworld*. <http://supplements.eyeworld.org/eyeworld-supplements/december-2018-clinical-survey>. Accessed February 15, 2019.

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