

ACCURACY AND EFFICIENCY IN CATARACT SURGERY



Implement meticulous protocols for quality control in surgical planning to streamline cataract surgery workflow and avoid mistakes.

BY JAMES C. LODEN, MD

Meeting patient expectations with cataract surgery is more challenging than ever and increasingly involves a team effort by the patient, surgeon, staff, and surgery scheduler—all before anyone enters the OR. Clear communication and consistent processes are therefore of the utmost importance to ensure that all parties are on the same page. How these processes are structured will differ from surgeon to surgeon and practice to practice, and finding what works for you and your team is critical. In this month's Fundamentals in Five, James C. Loden, MD, of Loden Vision Centers in Nashville, shares five protocols that his high-volume cataract surgery practice employs to ensure accuracy and efficiency.

—Kavitha R. Sivaraman, MD,
Section Editor

The workload of cataract surgery today is different than when I started practice in 1997. At that time, the only variables to consider preoperatively were which eye to operate on, what IOL power to select, and, when relevant, whether to perform limbal relaxing incisions at no added cost to the patient. Who would have thought in 2004—a year before the introduction of the Crystalens (Bausch + Lomb) and the start of the refractive cataract surgery revolution—that the decisions surgeons make before cataract surgery would become so complex? Of course, the greater the complexity of the preoperative decision tree, the greater the risk that mistakes will occur during surgical planning or intraoperatively (see *Considerations in Surgical Planning*, pg 79).

This article outlines the processes implemented at my high-volume

practice to maximize success and reduce the risk of error.

FUNDAMENTAL PREOPERATIVE PATIENT EDUCATION

Educational videos are sent to patients several days before their preoperative examination. During the exam, as their pupils are dilating, patient watch additional educational videos that illustrate the basics of cataract surgery and the benefits of laser cataract surgery and advanced technology IOLs.

Several platforms are available to facilitate this type of patient education. No platform is perfect. I recommend choosing one that is consistent with the procedures performed at the practice. The goal is to help patients feel less overwhelmed and confused during the preoperative examination. Confused and overwhelmed patients are more likely, in my experience, not to communicate their real desires and expectations, which can lead them to consent to a procedure and achieve an outcome with which they are ultimately unhappy.

FUNDAMENTAL CHARTING CLARITY

After the preoperative examination, the doctor—not a staff member—explains the patient's options. The doctor asks pointed questions about the patient's wishes and needs. The doctor then makes a recommendation, and the scribe and doctor ensure that the discussion and final recommendation are accurately documented in the patient's chart. The final recommendation must be clearly described and visible so that a surgery scheduler or technician understands the doctor's recommendation and the procedure(s) to be performed on each eye.

FUNDAMENTAL SURGICAL PLANNING SHEET

Two years ago, our practice started using surgical planning sheets. They are not part of our electronic medical records system. On the surgical planning sheet, the doctor circles the surgical options for which the patient qualifies and indicates which eye should undergo surgery first, whether surgery on both eyes will be scheduled, the patient's pupillary dilation status and history of refractive surgery, the recommended IOL, and for which laser package the patient qualifies.

Additional notes about the plan, such as monovision, MIGS, and trypan blue dye, are also listed. The doctor crosses out the boxes of any of the practice's offerings for which a patient is not a candidate. The information on this sheet should be clear enough that a minimally qualified new staff member with a high school education can immediately determine for what the patient is and is not a candidate. This is particularly useful when a patient decides not to accept the doctor's final recommendation because of cost or personal bias.

If a patient changes their mind about their choices before surgery, they must return to the clinic to sign new consent forms before the date of surgery. In my experience, changing the patient's selected package verbally and signing the new consent forms on the day of surgery at the ambulatory surgery center is a recipe for a mistake and/or a dissatisfied patient.

FUNDAMENTAL IOL SELECTION AND SURGICAL PLAN DOCUMENTATION

At larger centers, full-time dedicated biometry staff may select the IOLs and appropriate form and amount of

CONSIDERATIONS IN SURGICAL PLANNING

The decision tree for modern cataract surgical planning is complex. Variables that must be considered during the preoperative exam include the following:

- ▶ Does the patient desire correction that matches their current prescription?
- ▶ Does the patient want monovision?
- ▶ Which eye is being corrected for distance?
- ▶ Do you leave the nondominant eye at -2.00 D for monovision in accordance with their contact lens fitting by a prior doctor and target the dominant eye for distance?
- ▶ Does the patient want mini-monovision with an extended depth of focus IOL to improve spatial summation and decrease the risk of anisometropia?
- ▶ Does the patient want a multifocal IOL? If so, which one?
- ▶ Should the astigmatism be treated with a limbal relaxing incision, a toric IOL, or a secondary keratorefractive surgery?
- ▶ Is the patient interested in a Light Adjustable Lens (RxSight)? If so, is pupillary dilation sufficient, and are they taking any contraindicated medications?
- ▶ Will MIGS be performed? If so, which procedure?
- ▶ If the patient experiences dysphotopsias after surgery on the first eye, is a change in the IOL planned for the second eye warranted?
- ▶ Which eye should undergo surgery first?

astigmatism correction for each patient. At Loden Vision Centers, the surgeons do this. More than half of our patients pay for a premium-service laser cataract package, and I believe they expect their surgeon to do the surgical planning.

The surgical plan is selected using a paper printout of the patient's biometry measurements using the IOLMaster (Carl Zeiss Meditec), topography or tomography, chart notes, the surgical planning sheet, and the final consent form.

The surgeon circles the selected IOL and places their initials next to the circle. Later, a drawing of where to place any limbal relaxing incisions and the amount of astigmatism to be corrected are added. If a toric lens is to be used, the axis is confirmed and initialed by the surgeon. Technicians and staff are asked not to interrupt the doctor while treatment is

being selected in an effort to decrease the risk of careless mistakes.

FUNDAMENTAL TIMEOUTS

5 We implemented a series of *timeouts* for surgeons and staff on surgery days. Timeouts provide opportunities for quality control.

▶ **Timeout No. 1.** The first timeout occurs in the preoperative area when the surgeon marks the operative eye and confirms the surgical plan with the patient.

▶ **Timeout No. 2.** This timeout is for the physician assistant and the femtosecond laser technician. They reconfirm the operative eye and the astigmatism treatment before the femtosecond laser procedure is performed.

▶ **Timeout No. 3.** The final timeout is completed by the surgeon and the

circulating nurse in the OR. I have seen one or the other make a careless mistake but never both. The consent form is read by both to confirm accuracy. The IOL model and power, planned astigmatism correction, and any additional procedures are compared to what's listed on the biometry printout.

Most (98%) of our procedures are performed under topical anesthesia. We therefore can confirm the procedure with the patient if there is any doubt. If these steps do not alleviate all doubt, the surgeon or a staff member says, "stop," and the case is put on hold until a clearly defined resolution is reached. Key to the success of this strategy are staff training and creating an atmosphere in which they are comfortable calling out "stop." The staff must not fear negative consequences or retribution for doing so.

CONCLUSION

The increasing complexity of surgical decision-making increases the risk of mistakes and patient dissatisfaction post-operatively. Meticulous adherence to the protocols described herein has improved the accuracy and efficiency of refractive cataract surgery at our practice. ■

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