BETSY LEHMAN CENTER
for Patient Safety and Medical Error Reduction

# PATIENT SAFETY IN CATARACT SURGERY: A RESPONSE TO ADVERSE EVENTS IN MASSACHUSETTS

*Summary report of the Betsy Lehman Center's expert panel finding*

Following an increase in reports of adverse events involving cataract surgery in Massachusetts, the Betsy Lehman Center collaborated with the MA Society of Eye Physicians and Surgeons, the MA Society of Anesthesiologists, and the Department of Public Health to issue an advisory in May 2015. The Center then convened an expert panel of ophthalmologists, anesthesiologists, nurse managers and patient representatives to more closely examine the risks surfaced by these incidents and to develop recommendations for mitigating them.

## Why focus on cataract surgery?

Cataract surgery is the most common operation in the U.S. and among the safest procedures in medicine. Almost four million cataract surgeries were performed in 2015 nationally—more than 60,000 in Massachusetts alone—and these numbers are expected to grow. Serious, permanent complications from the procedure are rare. Yet, like most surgery, cataract removal involves complex processes prone to occasional systems failures that can harm patients. While the risk to any individual patient is low, the large volume of procedures means that even a miniscule error rate can add up to many patients harmed.

## Serious Reportable Events in Massachusetts

During 2014 and 2015, six hospitals and six ambulatory surgery centers in Massachusetts reported 16 Serious Reportable Events (SREs) related to cataract surgery to the Department of Public Health. These "never events" involved preventable errors that harmed patients. Five of the events caused permanent loss of vision due to globe perforation. Others required patients to postpone the procedure or undergo corrective surgery.

The most frequent type of SRE associated with cataract surgery was implantation of the wrong intraocular lens. There were also multiple mistakes in the administration of anesthesia. Other errors included surgeries performed on the wrong eye and, in one case, on the wrong patient. In addition to SREs, Massachusetts cataract surgery providers have filed reports with the state about complications related to eye blocks, including retrobulbar hemorrhage and serious systemic reactions.

## The response

Over seven months, the Betsy Lehman Center's expert panel and staff reviewed a unique collection of national and local data, and conducted key informant interviews, confidential conversations with facilities that had reported SREs, and surveys of Massachusetts cataract surgeons and facilities regarding eye anesthesia practices.

The panel's findings and recommendations were released in May 2016, and are summarized here. The full report, along with supplemental materials including tools to help with implementation of the recommendations and detailed results from the eye anesthesia survey can be found on the Betsy Lehman Center's website: www.betsylehmancenterma.gov

### KEY CONTRIBUTORS TO THE ERRORS INCLUDE:

- Lack of standardization within facilities—from lens orders to surgical site markings
- More than one lens in the operating room
- Incomplete or inadequate time out; or significantly separated in time from the procedure
- Poorly designed, handwritten lens order forms
- Issues related to safety culture
- Fast-paced, high-pressure environment

> *"How could this have happened [here]?...we are all right on top of it…we are very, very careful."*
>
> *- Operating room nurse at a hospital-affiliated surgery center*

* *The quotations included in this summary are drawn from voluntary, confidential conversations that the Betsy Lehman Center conducted with several of the facilities that reported SREs.*

**READ THE FULL REPORT:** www.betsylehmancenterma.gov/initiatives/cataract-surgery.php