

# What’s New in the Patient Safety World

October 2020

## Pre-op Testing Before Cataract Surgery Leads to What?

We often do talks on the adverse effects of low-value care and how such can lead to the diagnostic cascade and injuries to patients. One of our favorite examples is pre-op testing prior to cataract surgery. Most patients undergoing cataract surgery do not need any pre-op testing because it neither decreases the incidence of perioperative adverse events nor improves cataract surgery outcomes. Yet pre-op testing continues to be surprisingly frequent.

We often cite an article by Ganguli et al. ([Ganguli 2019](#)) that care cascades after preoperative EKG for cataract surgery can be costly. Of those who had a pre-op EKG, 15.9% had at least 1 potential cascade event. Those included more tests, cardiology visits, and treatment. Spending for the additional services was up to \$565 per Medicare beneficiary, or an estimated \$35,025,923 annually across all Medicare beneficiaries in addition to the \$3,275,712 paid for the preoperative EKG’s. That study focused on cost and did not assess whether those who had a care cascade suffered any adverse events.

But a new study ([Chen 2020](#)) shows yet another unexpected adverse effect of pre-op testing in older patients prior to cataract surgery – **falls!**

Chen and colleagues looked at data on almost 250,000 Medicare patients. They measured the mean and median number of days between ocular biometry and cataract surgery, calculated the proportion of patients waiting >30 days or >90 days for surgery, and determined the odds of having a fall within 90 days of biometry among patients of high-testing physicians (testing performed in  $\geq 75\%$  of their patients) compared to patients of low-testing physicians.

**Falls** before cataract surgery in patients of high-testing physicians **increased by 43%** within the 90 days following ocular biometry (1.0% vs 0.7%). The adjusted odds ratio of falling within 90 days of biometry in patients of high-testing physicians versus low-testing physicians was 1.10 (1.07 after adjusting for surgical wait time). Fall-related hip fractures, other fractures and joint dislocations were also significantly more frequent

during the period between biometry and surgery for those patients treated by high-testing physicians.

The delay associated with having a high-testing physician was approximately 8 days (estimate 7.97 days).

Confounding factors cannot be excluded as contributing to the disparity. Patients treated by higher-testing physicians were, on average, slightly older and in poorer health status but Charlson comorbidity index was comparable for the 2 groups. However, the authors found a lack of association between physician testing behavior and falls in the 360 days preceding biometry and felt that supports their hypothesis that falls that occur after a patient begins preparing for surgery are associated with the routine use of preoperative testing, rather than from other underlying differences in patients of high-testing physicians compared to patients of low-testing physicians.

Though the absolute numbers of patient having falls or fall-related injuries during the delay before surgery were low, any such events are unwarranted since the testing is unnecessary. This is probably the first study to document actual detrimental patient outcomes that occur as a result of unnecessary testing in this population. So not only does such unnecessary testing lead to unnecessary cost to the healthcare system, it probably does also result in some degree of patient harm. We also suspect that procedures related to diagnostic cascades following such testing may well also be associated with some degree of patient harm.

This is likely yet another example of “less is more”.

We’ve done several columns (listed below) on the relationship, at times complex and sometimes counterintuitive, between vision problems and falls.

**Some of our previous columns on falls after correction of vision:**

June 2010      [“Seeing Clearly a Common Sense Intervention”](#)  
June 2014      [“New Glasses and Fall Risk”](#)  
August 2014   [“Cataract Surgery and Falls”](#)  
October 2019   [“Visual and Hearing Loss and Medical Costs”](#)

**Some of our prior columns related to falls:**

- April 16, 2007      [“Falls With Injury”](#)
- July 17, 2007      [“Falls in Patients on Coumadin or Heparin or Other Anticoagulants”](#)
- January 1, 2008      [“Fall Prevention”](#)
- October 7, 2008      [“Lessons from Falls....from Rehab Medicine”](#)
- November 18, 2008   [“Ticket to Ride: Checklist, Form, or Decision Scorecard?”](#)
- August 4, 2009      [“Faulty Fall Risk Assessments?”](#)

- September 22, 2009 “[Psychotropic Drugs and Falls in the SNF](#)”
- December 22, 2009 “[Falls on Toileting Activities](#)”
- January 2010 “[Falls in the Radiology Suite](#)”
- June 2010 “[Seeing Clearly a Common Sense Intervention](#)”
- May 29, 2012 “[Falls, Fractures, and Fatalities](#)”
- June 5, 2012 “[Minor Head Trauma in the Anticoagulated Patient](#)”.
- January 15, 2013 “[Falls on Inpatient Psychiatry](#)”
- March 2013 “[Sedative/Hypnotics and Falls](#)”
- December 3, 2013 “[Reducing Harm from Falls on Inpatient Psychiatry](#)”
- June 2014 “[New Glasses and Fall Risk](#)”
- July 8, 2014 “[Update: Minor Head Trauma in the Anticoagulated Patient](#)”
- August 2014 “[Cataract Surgery and Falls](#)”
- November 4, 2014 “[Progress on Fall Prevention](#)”
- March 2015 “[Another Paradox: Falls Due to Walking Aids](#)”
- June 9, 2015 “[Add This to Your Fall Risk Assessment](#)”
- July 28, 2015 “[Not All Falls Are the Same](#)”
- October 2015 “[Patient Perception of Fall Risk](#)”
- October 27, 2015 “[Sentinel Event Alert on Falls and View from Across the Pond](#)”
- February 16, 2016 “[Fall Prevention Failing?](#)”
- March 14, 2017 “[More on Falls on Inpatient Psychiatry](#)”
- July 2017 “[Mobility vs. Falls](#)”
- February 2018 “[Global Sensory Impairment and Patient Safety](#)”
- February 20, 2018 “[Delirium and Falls](#)”
- March 2019 “[Newborn Falls](#)”
- July 2019 “[Increasing Mortality After Falls in Elderly](#)”
- January 14, 2020 “[More on Newborn Falls](#)”
- June 16, 2020 “[Tracking Technologies](#)”

## References:

Ganguli I, Lupo C, Mainor AJ, et al. Prevalence and Cost of Care Cascades After Low-Value Preoperative Electrocardiogram for Cataract Surgery in Fee-for-Service Medicare Beneficiaries. *JAMA Intern Med* 2019; 179(9): 1211-1219  
<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2735387>

Chen CL, McLeod SD, Lietman TM, et al. Preoperative medical testing and falls in Medicare beneficiaries awaiting cataract surgery. *Ophthalmology* 2020; Published online September 10, 2020  
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