

**Quality ID #389: Cataract Surgery: Difference Between Planned and Final Refraction**  
– National Quality Strategy Domain: Effective Clinical Care  
– Meaningful Measure Area: Functional Outcomes

**2021 COLLECTION TYPE:**  
**MIPS CLINICAL QUALITY MEASURES (CQMS)**

**MEASURE TYPE:**  
Outcome – High Priority

**DESCRIPTION:**  
Percentage of patients aged 18 years and older who had cataract surgery performed and who achieved a final refraction within +/- 1.0 diopters of their planned (target) refraction

**INSTRUCTIONS:**  
This measure is to be submitted **each time** a cataract procedure is performed during the performance period. This measure is intended to reflect the quality of services provided for the patient receiving cataract surgery.

**Note:** *This is an outcome measure and will be calculated solely using Merit-based Incentive Payment System (MIPS) eligible clinician, group, or third-party intermediary submitted data.*

- *For patients who receive the surgical procedures specified in the denominator coding, it should be reported whether or not the patient had a difference between planned and final refraction.*
- *Include only procedures performed through **September 30** of the performance period. This will allow the post-operative period to occur before third party intermediaries must submit data to CMS.*

**Measure Submission Type:**

Measure data may be submitted by individual MIPS eligible clinicians, groups, or third-party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third-party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

**DENOMINATOR:**  
All patients aged 18 years and older who had cataract surgery

**Denominator Criteria (Eligible Cases):**

Patients aged  $\geq 18$  years on date of encounter

**AND**

**Patient encounter during the performance period (CPT):** 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984, 66987, 66988

**WITHOUT**

**Modifier:** 55 or 56

**NUMERATOR:**  
Patients who achieved a final refraction (spherical equivalent) of +/- 1.0 diopters of their planned (target) refraction (spherical equivalent) within 90 days following cataract surgery. The refraction planned and final refraction values should correspond to the eye that underwent the cataract procedure

**Numerator Options:**  
**Performance Met:**

Patient achieves final refraction (spherical equivalent) +/- 1.0 diopters of their planned refraction within 90 days of surgery (**G9519**)

**OR**

**Performance Not Met:**

Patient does not achieve final refraction (spherical equivalent) +/- 1.0 diopters of their planned refraction within 90 days of surgery (**G9520**)

**RATIONALE:**

Refractive outcome is important to the patient and to the surgeon. Planned refraction is something the surgeon and patient discuss at the time of assessment for cataract surgery and is a way to align patient and surgeon expectations of the outcome. Comparing actual outcome to predicted outcome is a valuable measure of success.

Results of multiple large studies of cataract surgery have repeatedly demonstrated positive outcomes. The ASCRS National Cataract Database reported that at 3 months postoperatively 74.6% of patients were within  $\pm 1.0$  D of target spherical equivalent. The American Academy of Ophthalmology National Eyecare Outcomes Network (NEON) database (n=7626) also found similar rates of success, with 78% of patients within  $\pm 1.0$  D of target spherical equivalent. Kugelberg and Lundstrom published outcomes data from the Swedish registry and found in routine cataract surgeries 75% to 90% of patients ended up with refraction within 1 diopter of the target refraction. The study describes factors that influenced refractive outcome as older age and use of a clear corneal incision. Another 2009 study by Gale and colleagues reported outcomes improving from 79.7% to 87% within 3 measurement cycles and the authors suggested that a benchmark standard of 85% be established.

References:

Olson RJ, Braga-Mele R, Chen SH et al. Cataract in the Adult Eye Preferred Practice Pattern®. Ophthalmology 2017; 124:P1-P119

Lum F, Schein O, Schachat AP, Abbott RL, Hoskins HD, Steinberg EP. Initial two years of experience with the AAO Nation Eyecare Outcomes Network (NEON) cataract surgery database. Ophthalmology 2000; 107:691-97

Gale, RP, Johnston, RL, Zuberbuhler, B, McKibbin, M. Benchmark standards for refractive Outcomes After Cataract Surgery, Eye (London) 2009 Jan; 23 (1):149-52

Kugelberg M, Lundstrom M. Factors related to the degree of success in achieving target refraction in cataract surgery. J Cat Refr Surg 2008; 34(11):1935-39

**CLINICAL RECOMMENDATION STATEMENTS:**

This is an outcome measure. As such, no clinical recommendations are included.

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**The American Association of Eye and Ear Centers of Excellence's (AAEECE) significant past efforts and contributions to the development and updating of the measure is acknowledged. AAO is solely responsible for the review and enhancement ("Maintenance") of the measure as of June 5, 2015.**

AAO encourages use of the measure by other health care professionals, where appropriate.

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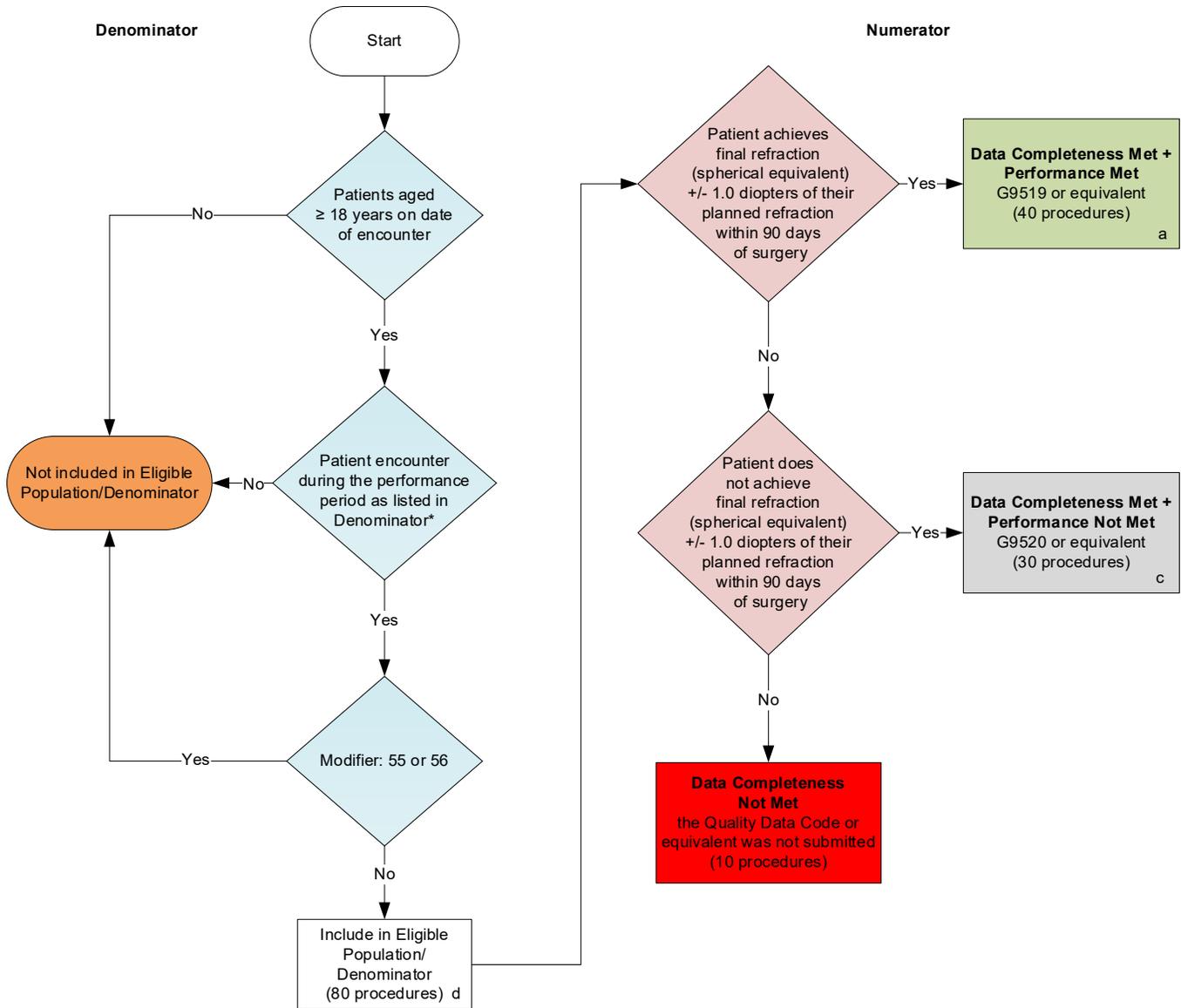
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## 2021 Clinical Quality Measure Flow for Quality ID #389: Cataract Surgery: Difference Between Planned and Final Refraction

*Disclaimer: Refer to the measure specification for specific coding and instructions to submit this measure.*



### SAMPLE CALCULATIONS

**Data Completeness=**  

$$\frac{\text{Performance Met (a=40 procedures)} + \text{Performance Not Met (c=30 procedures)}}{\text{Eligible Population / Denominator (d=80 procedures)}} = \frac{70 \text{ procedures}}{80 \text{ procedures}} = 87.50\%$$

**Performance Rate=**  

$$\frac{\text{Performance Met (a=40 procedures)}}{\text{Data Completeness Numerator (70 procedures)}} = \frac{40 \text{ procedures}}{70 \text{ procedures}} = 57.14\%$$

\*See the posted measure specification for specific coding and instructions to submit this measure  
 NOTE: Submission Frequency: Procedure

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 The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification. v5

**2021 Clinical Quality Measure Flow Narrative for Quality ID #389:  
Cataract Surgery: Difference Between Planned and Final Refraction**

**Disclaimer:** Refer to the measure specification for specific coding and instructions to submit this measure.

1. Start with Denominator
2. Check *Patients aged greater than or equal to 18 years on date of encounter*.
  - a. If *Patients aged greater than or equal to 18 years on date of encounter* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
  - b. If *Patients aged greater than or equal to 18 years on date of encounter* equals Yes, proceed to check *Patient encounter during the performance period as listed in Denominator\**.
3. Check *Patient encounter during the performance period as listed in Denominator\**:
  - a. If *Patient encounter during the performance period as listed in Denominator\** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
  - b. If *Patient encounter during the performance period as listed in Denominator\** equals Yes, proceed to check *Modifier: 55 or 56*.
4. Check *Modifier: 55 or 56*:
  - a. If *Modifier: 55 or 56* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
  - b. If *Modifier: 55 or 56* equal No, include in *Eligible Population/Denominator*.
5. Denominator Population:
  - a. Denominator Population is all Eligible Procedures in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 procedures in the Sample Calculation.
6. Start Numerator
7. Check *Patient achieves final refraction (spherical equivalent) plus or minus 1.0 diopters of their planned refraction within 90 days of surgery*:
  - a. If *Patient achieves final refraction (spherical equivalent) plus or minus 1.0 diopters of their planned refraction within 90 days of surgery* equals Yes, include in *Data Completeness Met and Performance Met*.
    - *Data Completeness Met and Performance Met* letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 procedures in the Sample Calculation.
  - b. If *Patient achieves final refraction (spherical equivalent) plus or minus 1.0 diopters of their planned refraction within 90 days of surgery* equals No, proceed to check *Patient does not achieve final refraction plus or minus 1.0 diopters of their planned refraction within 90 days of surgery*.
8. Check *Patient does not achieve final refraction plus or minus 1.0 diopters of their planned refraction within 90 days of surgery*:

- a. If Patient does not achieve final refraction plus or minus 1.0 diopters of their planned refraction within 90 days of surgery equals Yes, include in *Data Completeness Met and Performance Not Met*.
    - *Data Completeness Met and Performance Not Met* letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 30 procedures in the Sample Calculation.
  - b. If Patient does not achieve final refraction plus or minus 1.0 diopters of their planned refraction within 90 days of surgery equals No, proceed to check *Data Completeness Not Met*.
9. Check *Data Completeness Not Met*:
- a. If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 procedures have been subtracted from the Data Completeness Numerator in the Sample Calculation.

### **Sample Calculations**

Data Completeness equals Performance Met (a equals 40 procedures) plus Performance Not Met (c equals 30 procedures) divided by Eligible Population / Denominator (d equals 80 procedures). All equals 70 procedures divided by 80 procedures. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 procedures) divided by Data Completeness Numerator (70 procedures). All equals 40 procedures divided by 70 procedures. All equals 57.14 percent.

\*See the posted measure specification for specific coding and instructions to submit this measure

NOTE: Submission Frequency: Procedure

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.