NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** 1549 **NQF Project:** Surgery Endorsement Maintenance 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Cataracts: Patient Satisfaction within 90 Days Following Cataract Surgery
De.2 **Brief description of measure:** Percentage of patients aged 18 years and older who had cataract surgery and were satisfied with their care within 90 days following the cataract surgery
1.1-2 **Type of Measure:** Patient Engagement/Experience De.3 **If included in a composite or paired with another measure, please identify composite or paired measure** This is intended to be included in a composite measure for cataract surgery to provide a comprehensive evaluation of both the clinical and patient-centered outcomes. This group includes approved NQF measures and PQRI measures Measures 191 – 20/40 or better visual acuity within 90 days following cataract surgery and 192 – complications within 30 days of cataract surgery requiring additional surgical procedures, and a newly submitted measure: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery
De.4 **National Priority Partners Priority Area:** Patient and family engagement De.5 **IOM Quality Domain**: Patient-centered De.6 **Consumer Care Need:** Getting better

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	NQF Staff
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Agreement will be signed and submitted prior to or at the time of	**A** Y☐ N☐

measure submission A.4 **Measure Steward Agreement attached:** txNQFMeasureStewardAgreement_020309_Final-634278446871486346.pdf	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Payment Program, Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations)	**C** Y☐ N☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** Y☐ N☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. ***Measures must be judged to be important to measure and report*** *in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	**Eval Rating**
(for NQF staff use) **Specific NPP goal**:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, Frequently performed procedure, Leading cause of morbidity/mortality, High resource use 1a.2 1a.3 **Summary of Evidence of High Impact:** Cataracts are the leading cause of blindness worldwide and remain an important cause of blindness and visual impairment in the United States, accounting for approximately 50% of visual impairment in adults over the age of 40. Cataracts are the leading cause of treatable blindness among Americans of African descent age 40 and older and are the leading cause of visual impairment among Americans of African, Hispanic/Latino, and European descent. Cataract surgery with IOL implantation was the most frequently performed operation and the single largest expenditure for any Part B surgical procedure in the Medicare program, calculated by Part B procedure codes based on allowed charges. In 2008 (latest year available), payment for cataract was $2.1 billion, which is 1.8% of total allowed charges. 1a.4 **Citations for Evidence of High Impact:** 1. Congdon N, O´Colmain B, Klaver CC, et al. Causes and prevalence of visual impairment among adults in the United States. Arch Ophthalmol 2004;122:477-85. 2. Cotter SA, Varma R, Ying-Lai M, et al. Causes of low vision and blindness in adult Latinos: the Los	**1a** C☐ P☐ M☐ N☐

Angeles Latino Eye Study. Ophthalmology 2006;113:1574-82.
3. Centers for Medicare and Medicaid Services. Medicare leading Part B procedure codes based on allowed charges: calendar year 2010. Available at: www.cms.hhs.gov/datacompendium/. Accessed December 10, 2010.

1b. Opportunity for Improvement

1b.1 **Benefits (improvements in quality) envisioned by use of this measure:** The benefits are to enhance satisfaction of patients receiving cataract surgery. The primary indication of surgery is visual function that no longer meets the patient´s needs and for which cataract surgery provides a reasonable likelihood of improved vision, leading to satisfaction.

1b.2 **Summary of data demonstrating performance gap (variation or overall poor performance) across providers:**
This is an outcome of surgery indicator of direct relevance and importance to patients, their families and referring providers. The available evidence suggests that satisfaction with cataract surgery is found in about 90% of patients surveyed. While the potential for improvement appears seemingly small, the volume of cataract surgery in the U.S. of over 2.8 million surgeries means that the impact could affect more than 280,000 patients per year. Ideally, performance on this indicator would be as high as possible,with lower rates suggestive of opportunities for improvement.

1b.3 **Citations for data on performance gap:**
1. Mozaffarieh M, Krepler K, Heinzl H et al. Visual function, quality of life and patient satisfaction after ophthalmic surgery: a comparative study. Ophthalmologica 2004; 218:26-30.
2. Lledo R, Rodriguez T, Fontenia JR et al. Cataract surgery: An analysis of patient satisfaction with medical care. International Ophthalmology 22:227-32.
3. Lum F, Schein O, Schachat AP, et al. Initial two years of experience with the AAO National Eyecare Outcomes Network (NEON) cataract surgery database. Ophthalmology 2000; 107:691-7.
4. Lum F, Schachat AP, Jampel HD. The development and demise of a cataract surgery database. The Joint Commission Journal on Quality Improvement 2202; 28:108-114.

1b.4 **Summary of Data on disparities by population group:**

1b.5 **Citations for data on Disparities:**

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1c. Outcome or Evidence to Support Measure Focus

1c.1 **Relationship to Outcomes** (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** Patient satisfaction is a relevant, patient-centered patient experience type outcome for cataract surgery.

1c.2-3. **Type of Evidence:** Evidence-based guideline

1c.4 **Summary of Evidence** (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Several constructs have been found to be associated with patient satisfaction, with the physician having control over several of these. Some of these constructs include: physician-patient communication, information, accessibility, quality of medical care and outcomes, premises, professional care, length of communication, caring/trust, interpersonal skills, affordability of care, etc. Physician-patient communications and patient´s understanding of expectations and outcomes is a critical construct.

In the focus groups conducted for the S-CAHPS instrument, the following three constructs were identified as drivers of surgical care experience (good or bad):
1. surgeon´s interpersonal skills and behaviors
2. surgeon´s expertise/technical competence
3. surgeon´s skill in communicating and providing health information and patient education

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1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*):
Not rated in guideline because it does not serve as a treatment recommendation

1c.6 Method for rating evidence: The panel rated each recommendation on the strength of evidence in the available literature to support the recommendation made. The "ratings of strength of evidence" also are divided into three levels.
Level I includes evidence obtained from at least one properly conducted, well-designed, randomized controlled trial. It could include meta-analyses of randomized controlled trials.
Level II includes evidence obtained from the following:
- Well-designed controlled trials without randomization
- Well-designed cohort or case-control analytic studies, preferably from more than one center
- Multiple-time series with or without the intervention

Level III includes evidence obtained from one of the following:
- Descriptive studies
- Case reports
- Reports of expert committees/organizations (e.g., PPP panel consensus with peer review)

The I, II, and III can also be correlated with the USPSTF system of high, moderate and low.

1c.7 Summary of Controversy/Contradictory Evidence:

1c.8 Citations for Evidence (*other than guidelines*):
1. Schein OD, Steinberg EP, Javitt JC, et al. Variation in cataract surgery practice and clinical outcomes. Ophthalmology 1994;101:1142-52.
2. Mangione CM, Phillips RS, Lawrence MG, et al. Improved visual function and attenuation of declines in health-related quality of life after cataract extraction. Arch Ophthalmol 1994;112:1419-25.
3. Desai P, Minassian DC, Reidy A. National cataract surgery survey 1997-8: a report of the results of the clinical outcomes. Br J Ophthalmol 1999;83:1336-40.
4. McGwin G, Jr, Scilley K, Brown J, Owsley C. Impact of cataract surgery on self-reported visual difficulties: comparison with a no-surgery reference group. J Cataract Refract Surg 2003;29:941-8.
5. Colin J, El Kebir S, Eydoux E, Hoang-Xuan T, Rozot P, Weiser M. Assessment of patient satisfaction with outcomes of and ophthalmic care of cataract surgery. J Cataract Refract Surg. 2010 Aug;36(8):1373-9.
6. Nijkamp MD, Nuijts RM, Borne B, Webers CA, van der Horst F, Hendrikse F. Determinants of patient satisfaction after cataract surgery in 3 settings. J Cataract Refract Surg 2000 Sep;26(9):1379-88.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*):
In well-designed observational studies, cataract surgery consistently has been shown to have a significant impact on vision-dependent function; up to 90% of patients undergoing first-eye cataract surgery note improvement in functional status and satisfaction with vision.

Also, the guideline outlines the ophthalmologist´s responsibility for communication to the patient:

The ophthalmologist who is to perform the cataract surgery has the following responsibilities:
- To examine the patient preoperatively (see Ophthalmic Evaluation).[A:III]
- To ensure that the evaluation accurately documents the symptoms, findings, and indications for treatment.[A:III]
- To obtain informed consent from the patient or the patient's surrogate decision maker after discussing the risks, benefits, and expected outcomes of surgery, including anticipated refractive outcome and the surgical experience.[A:III]
- To review the results of presurgical and diagnostic evaluations with the patient or the patient's surrogate decision maker.[A:III]
- To formulate a surgical plan, including selection of an appropriate IOL.[A:III]
- To formulate postoperative care plans and inform the patient or the patient's surrogate decision maker of these arrangements (setting of care, individuals who will provide care).[A:III]
- To afford the patient or the patient's surrogate decision maker the opportunity to discuss the costs associated with surgery.[B:III]

1c.10 Clinical Practice Guideline Citation: American Academy of Ophthalmology. Cataract in the Adult Eye, Preferred Practice Pattern. San Francisco: American Academy of Ophthalmology, 2006. Available at: www.aao.org/ppp. **1c.11 National Guideline Clearinghouse or other URL:** http://www.guideline.gov/content.aspx?id=10173&search=cataract+and+cataract+2005+and+cataract+2006 **1c.12 Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*)**:** The ratings for communications to the patients are rated [A:III] which indicates the highest importance to care rating, based on expert opinion/consensus evidence. **1c.13 Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: The panel rated each recommendation according to its importance to the care process. This "importance to the care process" rating represents care that the panel thought would improve the quality of the patient's care in a meaningful way. The ratings of importance are divided into three levels. - Level A, defined as most important - Level B, defined as moderately important - Level C, defined as relevant but not critical The A, B, C ratings can be correlated with the USPSTF system of A, B, C for strength of recommendation. **1c.14 Rationale for using this guideline over others:** This guideline is the only United States guideline on cataract surgery contained in the National Guideline Clearinghouse.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, met? **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	**Eval Rating**
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome*)**:** Patients 18 years and older in the sample who were satisfied with their care within 90 days following cataract surgery. **2a.2 Numerator Time Window** (*The time period in which cases are eligible for inclusion in the numerator*)**:** One year **2a.3 Numerator Details** (*All information required to collect/calculate the numerator, including all codes, logic, and definitions*)**:** Patients 18 years and older in the sample who were satisfied with their care within 90 days following cataract surgery based on a patient satisfaction instrument (S-CAHPS) Patients who were satisfied based on the patient satisfaction instrument (S-CAHPS) and CPT Procedure	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
All patients aged 18 years and older in the sample who had cataract surgery

2a.5 Target population gender: Female, Male
2a.6 Target population age range: 18 years and older

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
One year

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
All patients aged 18 years and older in the sample who had cataract surgery
- CPT Procedure Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):**

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
No stratification

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Rate/proportion
2a.20 Interpretation of Score: Better quality = Higher score
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
The calculation of the measure would be determination of the number of patients who completed the patient satisfaction survey and were satisfied as the numerator over the number of patients in the sample.

Currently, there is no established method to define a threshold of "satisfaction" with the CAHPS instruments. CAHPS scores are actually normative scores; that is, they provide relative rankings rather than absolute rankings (where is a score is compared with an ´objective´ criterion). We would propose a threshold of the lowest 5% of scores, and then postulate that those individuals scoring above this threshold will have achieved satisfaction.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Methods would include comparison of means and percentiles and analysis of variance against established benchmarks in the literature.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
For this physician-level measure, it is anticipated to be used as a group or composite measure. Utilizing a sample, work in the field has indicated that a sample size of 30 patients would be adequate for typical practice sizes. Based on the Central Limit Theorem, the distribution of an average will tend to be normal with a sample size of 30. This is also the sample size utilized for CMS measure group reporting in PQRS. Therefore, a sample size of 30 patients is proposed. The Academy has a registry for PQRS measures. This survey instrument could be incorporated into the registry and patients could access the web portal in order to enter their results of the satisfaction survey. Other options, such as mail surveys or phone administered

surveys, could also be offered, and entered into the registry. This would alleviate any concerns of bias being introduced by having the patient fill it out in the physician´s office.

2a.24 **Data Source (***Check the source(s) for which the measure is specified and tested)*
Patient Reported Data/Survey

2a.25 **Data source/data collection instrument (***Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
«data_source_instrument»

2a.26-28 **Data source/data collection instrument reference web page URL or attachment:** URL
https://www.cahps.ahrq.gov/content/products/sc/PROD_SC_Surgical_Care.asp?p=1021&s=213

2a.29-31 **Data dictionary/code table web page URL or attachment:**

2a.32-35 **Level of Measurement/Analysis** (*Check the level(s) for which the measure is specified and tested)*
Clinician : Individual

2a.36-37 **Care Settings (***Check the setting(s) for which the measure is specified and tested)*
Ambulatory Care : Ambulatory Surgery Center (ASC), Ambulatory Care : Clinician Office, Hospital/Acute Care Facility

2a.38-41 **Clinical Services** (*Healthcare services being measured, check all that apply*)
Clinicians: Physicians (MD/DO)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 **Data/sample** *(description of data/sample and size)***:** The field test involved 96 surgeons in 33 different practices, representing a range of surgical specialties. A total of 5,627 adult patients were sent questionnaires, a total of 2,285 completed the questionnaire by mail. The major criteria for patient selection was having had a major surgery as defined by CPT codes with a 90 day global within 3 to 6 months prior to the start of the survey.

2b.2 **Analytic Method** *(type of reliability & rationale, method for testing)***:**
Surgeon-level reliability (that is, inter-rater reliability) is based on the theory that consumers who use the same surgeon should generally agree in their assessments of that surgeon. The reliability of aggregate surgeon scores increases with the ratio of between-to-within-surgeon variation in consumer assessments and with the number of respondents (which causes the within-surgeon-variance to shrink). This relationship of between- to within- surgeon variability was examined using analysis of variance with surgeon as the class variable and the consumer assessments as the dependent variable. Standard practice with CAHPS surveys is that surgeon-level reliabilities should be at least 0.25 and ideally greater than 0.40, corresponding to moderate and large effect sizes, respectively.
Internal consistency reliabilities were calculated using Cronbach´s coefficient alpha.

2b.3 **Testing Results** *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)***:**
The testing results for surgeon-level reliability showed that for 3 out of 4 composites, the surgeon-level reliabilities were ideal. The results were as follows for the mail mode group: pre-surgical = 0.50; peri-operative = 0.67; post-surgical = 0.43 and office staff = 0.00. The reliability coefficient of 0 for the fourth composite means that this cannot be used to detect differences among surgeons in the quality of their office staff.
The internal consistency reliabilities were high for three of the four composites and compares favorably to those found for other CAHPS surveys.
The results were as follows for the mail mode group: pre-surgical = 0.82; peri-operative = 0.69; post-surgical = 0.90; and office staff = 0.88. The lower score for the peri-operative composite reflects the heterogeneity of the sample.

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2c. Validity testing

2c.1 **Data/sample** *(description of data/sample and size)*: The field test involved 96 surgeons in 33 different practices, representing a range of surgical specialties. A total of 5,627 adult patients were sent questionnaires, a total of 2,285 completed the questionnaire by mail. The major criteria for patient selection was having had a major surgery as defined by CPT codes with a 90 day global within 3 to 6 months prior to the start of the survey.

2c.2 **Analytic Method** *(type of validity & rationale, method for testing)*:
Structural equation modeling as implemented by PROC CALIS to evaluate the fit of the data to the structure around which the questionnaire was designed. The maximum likelihood estimation method was used, taking into account that simulation studies suggest that the ML method is likely to result in conservative estimates of model fit. These data were also treated as continuous, consistent with the observed imputed values that comprised a portion of the data. The goodness of fit of the model to the data was evaluated using chi-square, the comparative fit index (CFI), the non-normed fit index (NNFI) and the average root mean square residual approximation (RMSEA). Current practice with regard to these indicators of model fit is to: 1) report chi-square and p-values but not to reject models where the p-value is <0.05 in data sets greater than 250 observations; 2) require RMSEA to be less than 0.10 and ideally less than 0.06 and 3) require the CFI and NNFI to be greater than 0.90.
Exploratory factor analysis on the correlation matrix was used with the principle factor method with squared multiple correlations as initial communality estimates and oblique rotation (promax) with Kaiser normalization. In determining the number of factors, the following information was considered: 1) the number of eigen values greater than one; 2) the point at which additional factors explained a trivial amount of variance in the data as evidence by the scree plot; and 3) the interpretability of the rotated vector, based on simple structure. Simple structure was determined by the pattern fo factor loadings after rotation. An item was considered to be conforming to simple structure if it had comparatively larger loadings on one factor and smaller loadings on all others. Large loadings were considered to be those greater than 0.40 and small loadings to be no larger than half the size of the larger loading and less than 0.25.
The investigators reviewed the exploratory factor analysis and used the formative research to select among the candidate composite models. The hypothetical model to be evaluated by the confirmatory factor analysis included 15 items and specified 4 composites concerning the following: Presurgical care; perioperative care, post-surgical followup and quality of interactions with the surgeon´s office staff.

2c.3 **Testing Results** *(statistical results, assessment of adequacy in the context of norms for the test conducted)*:
The results show that the model fit the observed correlation matrix of the mail mode responses reasonably well. The results were X2 = 463, df = 74, CFI = 0.95, NNFI = 0.94 and RMSEA = 0.07. With the combined set of mail and web responses, the results also showed a good fit, with X2 = 513, df = 74, CFI = 0.95, NNFI = 0.93 and RMSEA = 0.06.

The results for the confirmatory factor analysis for the final model found that all t-tests for beta-weights describing the relationship of items to their hypothesized composites were highly significant (p<0.0001), ranging from 0.38 to 0.91.

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2d. Exclusions Justified

2d.1 **Summary of Evidence supporting exclusion(s):**

2d.2 **Citations for Evidence:**

2d.3 **Data/sample** *(description of data/sample and size)*:

2d.4 **Analytic Method** *(type analysis & rationale)*:

2d.5 **Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:

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2e. Risk Adjustment for Outcomes/ Resource Use Measures **2e.1 Data/sample** *(description of data/sample and size)*: No risk adjustment strategy was used. **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** C☐ P☐ M☐ N☐ NA☐
2f. Identification of Meaningful Differences in Performance **2f.1 Data/sample from Testing or Current Use** *(description of data/sample and size)*: The field test involved 96 surgeons in 33 different practices, representing a range of surgical specialties. A total of 5,627 adult patients were sent questionnaires, a total of 2,285 completed the questionnaire by mail. The major criteria for patient selection was having had a major surgery as defined by CPT codes with a 90 day global within 3 to 6 months prior to the start of the survey. **2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance** *(type of analysis & rationale)*: The variability of assessments was evaluated by evaluating the percentage of consumers for whom the highest (i.e., the ceiling effect) and the lowest (i.e., the floor effect) possible scores were tabulated. **2f.3 Provide Measure Scores from Testing or Current Use** *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*: The percent at the highest score in the mail mode group were as follows: pre-surgical: 70%; peri-operative: 56%; post-surgical: 64%; and office staff: 87%. The results on the office staff indicates that there is little information about differences in the quality of office staff across surgeons. The relatively high ceiling effects on composites is believed to be due to a restricted range of performance in the field test sample, since participating surgeons were volunteers and were not randomly selected. Thus, high performers are likely to have been over-represented in the sample. A random sample of surgeons would probably provide a more accurate picture of the distribution of the composite scores.	**2f** C☐ P☐ M☐ N☐
2g. Comparability of Multiple Data Sources/Methods **2g.1 Data/sample** *(description of data/sample and size)*: The survey was also administered in a web-based version. The web-based version was completed by 465 of the respondents, who were about 17% of the respondents. This was field tested in the summer of 2008. In terms of modality of questionnaire (mail vs. web-based), this was investigated as a potential case mix adjuster and was not found to have any significant impact. **2g.2 Analytic Method** *(type of analysis & rationale)*: Structural equation modeling as implemented by PROC CALIS to evaluate the fit of the data to the structure around which the questionnaire was designed. The maximum likelihood estimation method was used, taking into account that simulation studies suggest that the ML method is likely to result in conservative estimates of model fit. These data were also treated as continuous, consistent with the observed imputed values that comprised a portion of the data. The goodness of fit of the model to the data was evaluated using chi-square, the comparative fit index (CFI), the non-normed fit index (NNFI) and the average root mean square residual approximation (RMSEA). Current practice with regard to these indicators of model fit is to: 1) report chi-square and p-values but not to reject models where the p-value is <0.05 in data sets greater than 250 observations; 2) require RMSEA to be less than 0.10 and ideally less than 0.06 and 3) require the CFI and NNFI to be greater than 0.90. **2g.3 Testing Results** *(e.g., correlation statistics, comparison of rankings)*: The web-administered questionnaire is comparable to the mailed questionnaire in terms of reliability and	**2g** C☐ P☐ M☐ N☐ NA☐

validity estimates. These are the statistics for the internal consistency reliability for the web only version: pre-surgical 0.77; peri-operative = 0.70; post-surgical = 0.87; and office staff = 0.79. The correlation with rating of surgeon was as follows: pre-surgical = 0.69; peri-operative = 0.29; post-surgical = 0.78; and office staff = 0.46. The mean composite scores were also identical to the first decimal point of those in the mail mode: pre-surgical = 3.83; peri-operative = 2.27; post-surgical = 3.79 and office staff = 3.82.	
2h. Disparities in Care **2h.1 If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified **2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**	**2h** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, met? **Rationale:**	***2*** C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)	Eval Rating
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** Not in use but testing completed **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): The plan are to have this used in a public reporting initiative within the next 3 years: the Centers for Medicare and Medicaid Services´ Physician Quality Reporting System. **3a.3 If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):** The plan is to use this with the American Academy of Ophthalmology´s Ophthalmic Patient Outcomes Database for quality improvement purposes within 3 years´ time. **Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **3a.4 Data/sample** *(description of data/sample and size)*: **3a.5 Methods** *(e.g., focus group, survey, QI project)*: **3a.6 Results** *(qualitative and/or quantitative results and conclusions)*:	**3a** C☐ P☐ M☐ N☐
3b/3c. Relation to other NQF-endorsed measures **3b.1 NQF # and Title of similar or related measures:**	
(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**	
3b. Harmonization If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target	**3b** C☐

population/setting/data source or different topic but same target population): **3b.2 Are the measure specifications harmonized? If not, why?**	P☐ M☐ N☐ NA☐
3c. Distinctive or Additive Value **3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** **5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:** This measure is based on the S-CAHPS which specifically evaluates patient satisfaction with surgical care.	**3c** C☐ P☐ M☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability?*	**3**
Steering Committee: Overall, to what extent was the criterion, *Usability*, met? **Rationale:**	**3** C☐ P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes **4a.1-2 How are the data elements that are needed to compute measure scores generated?** Survey	**4a** C☐ P☐ M☐ N☐
4b. Electronic Sources **4b.1 Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No **4b.2 If not, specify the near-term path to achieve electronic capture by most providers.** A web-based survey could be used and results uploaded into a data registry. Paper survey instruments could be scanned and incorporated into a data registry. The registry could calculate these results and provide these results as feedback to the physicians and as quality measures to the CMS PQRS.	**4b** C☐ P☐ M☐ N☐
4c. Exclusions **4c.1 Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No **4c.2 If yes, provide justification.**	**4c** C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences **4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** There is the potential for biases and inaccuracies based on patient recall and reporting of information. There is the potential for biases introduced if the patient fills out the survey in the physician´s office or is contacted by the physician´s office to follow up on the survey. One strategy to minimize this bias is to have the survey administered through a third party, e.g., the Academy´s data registry which could provide a web portal for patients to fill out the survey form or other options (mail survey, phone administered survey).	**4d** C☐ P☐ M☐ N☐

4e. Data Collection Strategy/Implementation

4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:
There is a burden upon the office practice to survey patients post cataract surgery. The vast majority of patients are elderly and they may require assistance/prompting in responding to the surveys. This then will entail time taken out by the office staff. To ensure compliance with the follow-up service will also require attention. Therefore, we propose a minimal sampling size of 30 patients, which would reduce burden on the physicians´ practices and optimize response rates. The survey would be administered by a third party (a registry for reporting PQRS measures sponsored by the American Academy of Ophthalmology) to prevent or minimize bias which might be introduced if it is an in-office paper survey with questions asked by the office staff. Options would be provided to the patient, either online survey, mail survey or phone survey, depending on their preferences and abilities, because these patients are elderly and have visual impairment.

4e.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*)**:**
There are costs of data collection and follow up of patients who haven´t filled out the surveys. There are no fees associated with proprietary measures. Therefore, we have proposed a sample size of 30, which will reduce the burden of these costs.

4e.3 Evidence for costs:

4e.4 Business case documentation:

4e
C☐
P☐
M☐
N☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility?*

4

Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met?
Rationale:

4
C☐
P☐
M☐
N☐

RECOMMENDATION

(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**

Time-limited ☐

Steering Committee: Do you recommend for endorsement?
Comments:

Y☐
N☐
A☐

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner)
Co.1 Organization
American Academy of Ophthalmology and the Hoskins Center for Quality Eye Care, 655 Beach Street, San Francisco, California, 94109-1336

Co.2 Point of Contact
Flora, Lum, MD, flum@aao.org, 415-561-8592-

Measure Developer If different from Measure Steward
Co.3 Organization
American Academy of Ophthalmology and the Hoskins Center for Quality Eye Care, 655 Beach Street, San Francisco, California, 94109-1336

Co.4 Point of Contact Flora, Lum, MD, flum@aao.org, 415-561-8592-
Co.5 Submitter If different from Measure Steward POC Flora, Lum, MD, flum@aao.org, 415-561-8592-, American Academy of Ophthalmology and the Hoskins Center for Quality Eye Care
Co.6 Additional organizations that sponsored/participated in measure development American Society of Cataract and Refractive Surgery
ADDITIONAL INFORMATION
Workgroup/Expert Panel involved in measure development **Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.** Priscilla Arnold, MD; David Chang, MD; John Thompson, MD, Kevin Miller, MD, Leon Herndon, MD
Ad.2 If adapted, provide name of original measure: **Ad.3-5 If adapted, provide original specifications URL or attachment**
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2010 **Ad.7 Month and Year of most recent revision:** 12, 2010 **Ad.8 What is your frequency for review/update of this measure?** Every 3 years **Ad.9 When is the next scheduled review/update for this measure?** 12, 2013
Ad.10 Copyright statement/disclaimers: Copyright by the American Academy of Ophthalmology 2010
Ad.11 -13 Additional Information web page URL or attachment: Attachment visual functionand patient satisfaction measure Nov 2010-634279328820242414.doc
Date of Submission (*MM/DD/YY*)**:** 06/10/2011

American Academy of Ophthalmology

Eye Care III
Physician Performance Measurement Set

Eye Care Work Group *(specialty)*
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Surgical Management Subgroup:
David Chang, MD (ophthalmologist**)**
Leon W. Herndon, MD (ophthalmologist)
Kevin Miller MD (ophthalmologist)
John T. Thompson, MD (ophthalmologist)

Staff:

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Flora Lum, MD

Purpose of Measures:
These clinical performance measures, developed by the American Academy of Ophthalmology, are designed for individual quality improvement. Unless otherwise indicated, the measures are also appropriate for accountability if appropriate methodological, statistical, and implementation rules are achieved.

The proposed measures seek to advance performance measures for eye care by including explicit measures of patient visual function and patient satisfaction so as to more directly connect process measures to issues of patient interest, satisfaction, and empowerment.

Accountability Measures:
Measure #1 Cataracts: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery
Measure #2 Cataracts: Patient Satisfaction within 90 Days Following Cataract Surgery

Intended Audience and Patient Population:
Ophthalmologists may implement these measures if and when they provide the cataract surgery addressed in the measures. The measures are designed for calculating reporting or performance measurement at the individual level.

Measure Specifications
Draft specifications to report on these measures for eye care using administrative (claims) data are included in this document. We have identified codes for these measures, including ICD-9 and CPT (Evaluation & Management Codes, Category I and where Category II codes would apply). Specifications for additional data sources, including EHRs, will be fully developed at a later date.

Measure Exclusions:
For ***process measures***, there exist three categories of reasons for which a patient may be excluded from the denominator of an individual measure:

- **Medical reasons**

Includes:
- not indicated (absence of organ/limb, already received/performed, other)
- contraindicated (patient allergic history, potential adverse drug interaction, other)

- **Patient reasons**

Includes:
- patient declined
- economic, social, or religious reasons
- other patient reasons

- **System reasons**

Includes:
- resources to perform the services not available
- insurance coverage/payor-related limitations
- other reasons attributable to health care delivery system

These measure exclusion categories are not available uniformly across all measures; for each measure, there must be a clear rationale to permit an exclusion for a medical, patient, or system reason. The exclusion of a patient may be reported by appending the appropriate modifier to the CPT Category II code designated for the measure:

- **Medical reasons**: modifier 1P

- **Patient reasons**: modifier 2P

- **System reasons**: modifier 3P

Although this methodology does not require the external reporting of more detailed exclusion data, physicians should document the *specific* reasons for exclusion in patients' medical records for purposes of optimal patient management and audit-readiness. Also, each physician's exclusions data could be self-assessed to identify practice patterns and opportunities for quality improvement.

For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exclusion.

Please refer to documentation for each individual measure for information on the acceptable exclusion categories and the codes and modifiers to be used for reporting.

For ***outcome measures***, there are acceptable reasons for which a patient may be excluded from the denominator. Each specified reason is reportable with a CPT Category II code or CPT Category I code designated for that purpose.

Data Capture and Measure Calculation
This is intended for physicians to collect data on each patient eligible for a measure. Feedback on measures should be available to physicians by patient to facilitate patient management and in aggregate to identify opportunities for improvement across a physician's patient population.

Measure calculations will differ depending on whether a rate is being calculated for performance or reporting purposes.

The method of calculation for performance follows these steps: first, identify the patients who meet the eligibility criteria for the denominator (PD); second, identify which of those patients meet the numerator criteria (A); and third, for those patients who do not meet the numerator criteria, determine whether an appropriate exclusion applies and subtract those patients from the denominator (C). (see examples below)

The methodology also enables implementers to calculate the rates of patient exclusions and to further analyze both low and high rates, as appropriate (see examples below).

The method of calculation for reporting differs. One program which currently focuses on reporting rates is the Centers for Medicare and Medicaid Services (CMS) Physician Quality Reporting Initiative (PQRI). Currently, under that program design, there will be a reporting denominator determined solely from claims data (CPT and ICD-9), which in some cases result in a reporting denominator that is much larger than the eligible population for the performance denominator. Additional components of the reporting denominator are explained below.

The components that make up the numerator for reporting include all patients from the eligible population for which the physician has reported, including: the number of patients who meet the numerator criteria (A), the number of patients for whom valid exclusions apply (C) and also the number of patients who do not meet the numerator criteria (D). These components, where applicable, are summed together to make up the inclusive reporting numerator. The calculation for reporting will be the reporting numerator divided by the reporting denominator. (see examples below).

Examples of calculations for reporting and performance are provided for each measure.

Calculation for Performance

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Numerator (A) Includes:
Number of patients meeting numerator criteria

Performance Denominator (PD) Includes:
Number of patients meeting criteria for denominator inclusion

Denominator Exclusions (C) Include:
Number of patients with valid medical, patient or system exclusions (where applicable; will differ by measure)

Performance Calculation

A (# of patients meeting numerator criteria) PD (# patients in denominator) – C (# patients with valid denominator exclusions)

It is also possible to calculate the percentage of patients excluded overall, or excluded by medical, patient, or system reason where applicable**:**

Overall Exclusion Calculation

C (# of patients with any valid exclusion) PD (# patients in denominator)

OR

Exclusion Calculation by Type

C_1 (# patients with medical reason) **PD** (# patients in denominator) C_2 (# patients with patient reason) **PD** (# patients in denominator) C_3 (# patients with system reason) **PD** (# patients in denominator)

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator

Reporting Numerator includes each of the following components, where applicable. (There may be instances where there are no patients to include in A, C, D, or E).

A. Number of patients meeting additional denominator criteria (for measures where true denominator cannot be determined through ICD-9 and CPT Category I coding alone) AND numerator criteria
C. Number of patients with valid medical, patient or system exclusions (where applicable; will differ by measure)
D. Number of patients not meeting numerator criteria and without a valid exclusion
E. All other patients not meeting additional denominator criteria (for measures where true denominator cannot be determined through ICD-9 and CPT Category I coding alone)

Reporting Denominator (RD) Includes:
RD. Denominator criteria (identifiable through ICD-9 and CPT Category I coding)

Reporting Calculation

A(# of patients meeting additional denominator criteria AND numerator criteria) + **C**(# of patients with valid exclusions) + **D**(# of patients NOT meeting numerator criteria) + **E**(# of patients not meeting additional denominator criteria) **RD** (# of patients in denominator)

Eye Care

Measure #1 Cataracts: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery

This measure may be used as an Accountability measure.

Clinical Performance Measure
Numerator: Patients who had improvement in visual function achieved within 90 days following cataract surgery **Denominator:** All patients aged 18 years and older who had cataract surgery **Denominator Exclusions:** The patient refuses to participate or the patient is unable to complete the questionnaire, or there is a medical reason **Measure:** Percentage of patients aged 18 years and older who had cataract surgery and had improvement in visual function achieved within 90 days following the cataract surgery
The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure: **This is an outcomes measure.** As such, no statements in the guideline are specific to this measurement topic.
Rationale for the measure: 1. Scientific basis for measuring visual function outcomes after cataract surgery. Visual function has been described as having multiple components, including central near, intermediate, and distance visual acuity; peripheral vision;[1] visual search; binocular vision; depth perception; contrast sensitivity; perception of color; adaptation; and visual processing speed.[2] Visual function also can be measured in terms of functional disability caused by visual impairment.[3] Many activities are affected by more than one of these visual components. Health services researchers have increasingly emphasized function and quality of life as the outcomes of treatment that are most critical and applicable to the patient. As previously stated, the primary purpose in managing a patient with cataract is to improve functional vision and the quality of life. In well-designed observational studies, cataract surgery consistently has been shown to have a significant impact on vision-dependent function. The Cataract Patient Outcomes Research Team (PORT) reported that 90% of patients under-going first-eye cataract surgery noted improvement in functional status and satisfaction with vision.[4] The Activities of Daily Vision Study of elderly patients with a high prevalence of coexisting ocular and medical diseases reported improved visual function in 80% of patients at 12 months after surgery.[5] A National Cataract Study conducted in England of 1,139 patients who had cataract surgery found that preoperative functional impairment varied in relation to gender, age, and visual acuity. Men were more likely to have trouble with driving, glare, and employment, and women

were more likely to have difficulties with activities of daily living and recreational activities.[6] Studies have found that regardless of the preoperative visual acuity in the better eye, most patients reported improvement in their ability to perform visually dependent tasks after undergoing cataract surgery.[4-6]

Several studies have reported an association between improved visual function after cataract surgery and improved health-related quality of life.[1,5,7-8] Visual function plays an important role in physical function, particularly in terms of mobility.[9] The loss of visual function in the elderly is associated with a decline in physical and mental functioning as well as in independence in activities of daily living,[10] including night-time driving, daytime driving, community activities, and home activities. Elderly patients with visual impairment only (and no other physical or mental impairments) were 2.5 times as likely to experience functional decline than elderly patients without visual impairment.

Improved visual function following cataract surgery can ameliorate the progressive deterioration of quality of life seen in elderly patients.[1,5] In a cohort of 464 patients 65 years old and older, cataract extraction improved visual function and health-related quality of life. Patients with an improvement in their Activities of Daily Vision Scale (ADVS), a brief measure of vision-specific functional status,[11] had from 10% to 59% less decline in nearly all Short Form (SF)-36 dimensions.[5] The SF-36 is a generic global measure of multidimensional health-related quality of life.[12] A nationally representative population of 7,114 persons who were 70 years old and older showed that limitations in vision correlated with decreased functional status.[13] The unadjusted functional score of a person with reported poor vision was four times worse than the score for a person with excellent vision.[13] This difference was comparable with the differences found in other chronic conditions such as arthritis. This relationship with vision persisted, even after adjustment for health, demographics, and economic status. Individuals who rated their vision as other than excellent reported worse functional status, even when controlled for the presence of other medical conditions, education, income, general health status, and other symptoms. By improving visual function, cataract surgery may play an important role in preserving overall functional status, reducing associated injuries and accidents, and preventing disability in at-risk elderly patients.[10]

An analysis of the Medical Outcomes Study found that having blurred vision more than once or twice a month has a significant impact on functional status and well-being, particularly on problems with work or other daily activities as a result of physical health.[14] This impact was found to be greater than the impact of several other chronic conditions, such as hypertension, history of myocardial infarction, type 2 diabetes mellitus, indigestion, trouble urinating, and headache. In one study, patients planning to undergo cataract surgery assigned a mean preoperative preference value of 0.68 on a scale ranging from 0 to 1 (where 0 is death and 1 is excellent health), indicating that the visual impairment from cataracts had a substantial impact on their quality of life.[11] Visual impairment is an important risk factor for falls[15] and for hip fracture.[16] Specifically, the Study for Osteoporotic Fractures Research Group found that poor depth perception and decreased contrast sensitivity independently increased the risk of hip fracture.[17]

Visual impairment, in particular a decrease of visual acuity and contrast sensitivity, has been shown to be associated with difficulties in driving.[18] In one study, older drivers with visually significant cataract were twice as likely as older drivers without cataract to report reduction in days driven and four times as likely to report difficulties in challenging driving situations.[19] Drivers with visually significant cataract were 2.5 times more likely to have had an at-fault involvement in a motor vehicle crash in the past 5 years compared with drivers without cataract.[19] This association was significant, even after accounting for other factors such as impaired general health, age, mental status deficit or depression. In this study, visually significant cataract was determined by reviewing the participant's medical record and most recent eye examination by an eye care specialist. The study required that cataract in both eyes was the cause of the visual impairment, based on the medical record; an additional inclusion criterion was best-corrected visual acuity in one eye of 20/40 or worse. A further study in the same group demonstrated that drivers with a history of crash involvement were eight times more likely to have a serious contrast

sensitivity deficit (defined as a Pelli-Robson score of 1.25 or less) in the worse eye than those who had no history of crash involvement.[20] A severe contrast sensitivity deficit in only one eye was still significantly associated with crash involvement.[20]

Binocular vision is better than the vision of a single eye. The simultaneous use of the two eyes is complex and requires the integration of disparate images from each eye. A study demonstrated that binocular vision resulted in better perception of form, color, and the relationship of the body to the environment, which facilitated manipulation, reaching, and balance, particularly under dim illumination.[21] However, if the vision of one eye is reduced due to cataract, visual performance can fall below the level of monocular vision by a mechanism known as binocular inhibition,[22] which reduces patients' visual acuity and contrast sensitivity.[23] A study of the Framingham Study Cohort found that poor vision in one or both eyes was associated with an increased risk of hip fracture. It also found that patients with good vision in one eye and moderately impaired vision in the other eye had a higher risk of fracture than those with similar visual impairment in both eyes.[24] A study of 150 patients before and after cataract surgery found that poor binocular visual acuity was related to more problems in activities of daily living.[25] Another study, based on patients who reported no beneficial outcomes after first-eye cataract surgery in the National Swedish Cataract Outcome register, found that anisometropia was the reason for the poor outcome in one-third of cases.[26] These studies have shown that second-eye surgery is important to visual and physical function.

In summary, these studies demonstrate that physical function, emotional well-being, and overall quality of life can be enhanced when visual function is restored by cataract extraction.[27]

Improved visual function as a result of cataract surgery includes the following:

- Better optically corrected vision.
- Better uncorrected vision with reduced spectacle dependence.
- Increased ability to read or do near work.
- Reduced glare.
- Improved ability to function in dim levels of light.
- Improved depth perception and binocular vision.
- Improved color vision.

Improved physical function as a critical outcome of cataract surgery includes the following:

- Increased ability to perform activities of daily living.
- Increased opportunity to continue or resume an occupation.
- Increased mobility (walking, driving).

Improved mental health and emotional well-being as a second critical outcome of cataract surgery includes the following benefits:

- Improved self-esteem and independence.
- Increased ability to avoid injury.
- Increased social contact and ability to participate in social activities.
- Relief from fear of blindness.

Most patients achieve improved visual function after cataract surgery. This outcome is achieved consistently through careful attention through the patient selection process, accurate measurement of axial length and corneal power, appropriate selection of an IOL power calculation formula, etc. As such, it reflects the care and diligence with which the surgery is assessed, planned and executed. Failure to achieve this after surgery would reflect patterns of patient selection or treatment that should be

assessed for opportunities for improvement.

Sometimes cataract surgery is performed for other medical reasons other than to improve impaired visual function caused by cataract. These circumstances include the following: clinically significant anisometropia in the presence of a cataract; when the lens opacity interferes with optimal diagnosis or management of posterior segment conditions, when the lens causes inflammation (phacolysis, phacoanaphylaxis) and when the lens induces angle closure (phacomorphic or phacotopic). In these situations, improved visual function as a result of the removal of the cataract is not expected, because of the pre-existing comorbid conditions.

2. Evidence of a gap in care

This is an outcome of surgery indicator of direct relevance and import to patients, their families and referring providers. The available evidence suggests that cataract surgery achieves this in about 90% of patients. While the potential for improvement is seemingly small, the volume of cataract surgery in the U.S. of over 2.8 million surgeries means that the impact could affect more than 100,000 patients per year. Ideally, performance on this indicator would be as high as possible, with lower rates suggestive of opportunities for improvement.

Definitions:

Standardized Tool – An assessment tool that has been appropriately validated for the population for which it being used. Examples of tools for visual function assessment include, but are not limited to: National Eye Institute-Visual Function Questionnaire (VFQ), the Visual Function (VF)-14, the modified VF-8, the Activities of Daily Vision Scale (ADVS), the Catquest and the modified Catquest-9.

Vision Function Assessment – Questionnaires designed to measure a patient's ability to perform the everyday tasks requiring vision.

Data Capture and Calculations:

Calculation for *Performance*

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Performance Numerator (A) Includes:

- Patients who had an improvement in their visual function achieved within 90 days following cataract surgery

Performance Denominator (PD) Includes:

- All patients aged 18 years and older

AND

- Had cataract surgery

Performance Denominator Exclusions (C) Includes:

A patient is excluded if the following condition(s) exist:

Medical reasons:

When cataract surgery was performed for these indications:

- Clinically significant anisometropia in the presence of a cataract
- The lens opacity interferes with optimal diagnosis or management of posterior segment conditions
- The lens causes inflammation (phacolysis, phacoanaphylaxis)
- The lens induces angle closure (phacomorphic or phacotopic)

Patient reasons:

- The patient refuses to participate
- The patient is unable to complete the questionnaire

Performance Calculation

$$\frac{\text{A (\# of patients meeting measure criteria)}}{\text{PD (\# of patients in denominator)} - \text{C (\# of patients with valid denominator exclusions)}}$$

Components for this measure are defined as:

A	# of patients who had an improvement in their visual function achieved within 90 days following cataract surgery
PD	# of patients aged 18 years and older who had cataract surgery

C	# of patients with documented patient reason for not completing their visual function assessment within 90 days following cataract surgery

Calculation for Reporting:
For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

A. Patients who had an improvement in their visual function achieved within 90 days following cataract surgery

C. Patients who did not complete their visual function assessment within 90 days following cataract surgery but for whom there is a documented medical or patient reason for not doing so

D. Patients who did not have an improvement in their visual function achieved within 90 days following cataract surgery and there is no documented medical or patient reason for not doing so

Reporting Denominator (RD) includes:

- Patients aged 18 years and older AND
- Had cataract surgery

Reporting Calculation

$$\frac{\text{A (\# of patients meeting measure criteria) + C (\# of patients with valid exclusions) + D (\# of patients NOT meeting numerator criteria)}}{\text{RD (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who had an improvement in their visual function achieved within 90 days following cataract surgery
C	# of patients who did not complete their visual function assessment within 90 days following cataract surgery but for whom there is a documented medical or patient reason for not doing so
D	# of patients who did not have an improvement in their visual function achieved within 90 days following cataract surgery and there is no documented medical or patient reason for not doing so
RD	# of patients aged 18 years and older who had cataract surgery

Measure Specifications - Measure #1 Cataracts: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery

Measure specifications will be provided for multiple data sources.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation)

Denominator (Eligible Population): All patients aged 18 years and older who had cataract surgery

- CPT Procedure Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984

Numerator: Patients who had an improvement in their visual function achieved within 90 days following cataract surgery

Report the following CPT Category II code:

_____ - Improved visual function achieved within the 90 days following cataract Surgery

Denominator Exclusions: Documentation of medical reason for not improving visual function within 90 days of cataract surgery

- Append modifier to CPT Category II Code: -1P

Documentation of patient reason for not improving visual function within 90 days of cataract surgery

- Append modifier to CPT Category II Code: -2P

B. Registry

Registry reporting requires users to identify the eligible population (denominator) using CPT codes and patient demographics. The numerator options as described in the CPT Category II codes are used to report the numerator of the measure. The CPT Category II codes listed do not need to be submitted for registry-based submissions, however these codes may be submitted for those registries that utilize claims data.

C. Electronic Health Record System (in development)

D. Paper Medical Record (in development)

Eye Care

Measure #2 Cataracts: Patient Satisfaction within 90 Days Following Cataract Surgery

This measure may be used as an Accountability measure.

Clinical Performance Measure
Numerator: Patients who were satisfied with their care within 90 days following cataract surgery **Denominator:** All patients aged 18 years and older who had cataract surgery **Denominator Exclusions:** The patient refuses to participate or the patient is unable to complete the questionnaire **Measure:** Percentage of patients aged 18 years and older who had cataract surgery and were satisfied with their care within 90 days following the cataract surgery
The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure: **This is an outcomes measure.** As such, no statements in the guideline are specific to this measurement topic.
Rationale for the measure: 1. Scientific basis for measuring patient satisfaction after cataract surgery. Patient satisfaction is a valuable performance indicator for measuring the quality of care delivered by ophthalmologists providing cataract surgery. In the broadest sense, patient satisfaction is an assessment of the patient's experience with the care process delivered by health plans, clinicians, health systems, hospitals, etc. This experience can cover domains as diverse as information/education, interpersonal manner, emotional support, accessibility, convenience, outcomes or results, environment, personalization, involvement in care, finances, etc. In 1996, The American Academy of Ophthalmology launched the National Eyecare Outcomes Network (NEON) database. [28,29] From January 1, 1996 through March 30, 2001, 249 ophthalmologists at 114 different practice sites submitted data to the NEON cataract surgery database. Post-operative patient satisfaction responses were collected for 6,154 patients, or about 34.5% of all patients who had pre-operative forms submitted. This assessment was performed at a median of 4.1 weeks postoperatively for all patients enrolled in the database. A 12-item questionnaire was used to assess patient satisfaction. Patient satisfaction was associated with younger age and absence of ocular comorbidity. Other studies of patient satisfaction after cataract surgery in Austria and in Spain. One study found that patients with pre-existing eye disease, including those patients with improved visual acuity after surgery, were the least satisfied with the results of surgery. [30] In these cases, improved patient

education prior to surgery could be helpful in improving patient satisfaction. Another study found that patient satisfaction was associated with expectations prior to surgery.[31]

Most patients are satisfied with their care and results after cataract surgery. This outcome is achieved consistently through careful attention through the patient selection process, accurate measurement of axial length and corneal power, appropriate selection of an IOL power calculation formula, etc. As such, it reflects the care and diligence with which the surgery is assessed, planned and executed. Failure to achieve this satisfaction after surgery would reflect patterns of patient selection or treatment that should be assessed for opportunities for improvement.

Use of this indicator in the PQRI program in the claims reporting method would require some modification to the current reporting of post-operative care for patients undergoing cataract surgery, since this indicator would be operative during the 90 day global period. However, there is a strong and practical precedent for such modifications in that reporting arrangements have previously been made to accommodate co-management of care by different providers during the post-operative period. A similar adjustment to allow for filing of a claim of meeting this goal at one point in the 90 day global period would be sufficient, potentially drawing upon the methods to demarcate the onset of co-management transfer of post-operative care.

Various patient satisfaction instruments exist, but an instrument developed by the program, Consumer Assessment of Healthcare Providers and Systems (CAHPS), Agency for Healthcare Research and Quality develops and supports the use of a comprehensive and evolving family of standardized surveys that ask consumers and patients to report on and evaluate their experiences with health care. These surveys cover topics that are important to consumers, such as the communication skills of providers and the accessibility of services. AHRQ first launched the CAHPS program in October 1995 in response to concerns about the lack of good information about the quality of health plans from the enrollees' perspective. At that time, numerous public and private organizations collected information on enrollee and patient satisfaction, but the surveys varied from sponsor to sponsor and often changed from year to year.

The CAPHS Surgical Care Survey asks adult patients to report on surgical care, surgeons, their staff, and anesthesiologists. It was developed by the American College of Surgeons and the Surgical Quality Alliance to assess patients' experiences before, during, and after surgery. In early 2010, the CAHPS Consortium voted to adopt the Surgical Care Survey as an official CAHPS survey. The Surgical Care Survey expands on the current CAHPS Clinician & Group Survey, which focuses on primary and specialty care, by incorporating domains that are relevant to surgical care, such as informed consent, anesthesia care, and post-operative follow-up. The survey is unique in that it assesses patients' experiences with surgical care in both the inpatient and outpatient settings by asking respondents about their care before, during, and after surgery

The main purpose of the CAHPS Surgical Care Survey is to address the need to assess and improve the experiences of surgical patients. Like other CAHPS surveys, this questionnaire focuses on aspects of surgical quality that are important to patients and for which patients are the best source of information. The survey results are expected to be useful to everyone with a need for information on the quality of surgeons and surgical care, including patients, practice groups, health plans, insurers, and specialty boards. Patients can use the information to help make better and more informed choices about their surgical care. Practices, health plans, and insurers can use the survey results for quality improvement initiatives and incentives. Specialty boards may use the survey for maintenance of certification.

https://www.cahps.ahrq.gov/content/products/sc/PROD_SC_Surgical_Care.asp?p=1021&s=213

2. Evidence of a gap in care

This is an outcome of surgery indicator of direct relevance and import to patients , their families and referring providers. The available evidence suggests that cataract surgery achieves this in about 90% of patients. While the potential for improvement appears seemingly small, the volume of cataract surgery in the U.S. of over 2.8 million surgeries means that the impact could affect more than 100,000 patients per year. Ideally, performance on this indicator to be as high as possible, with rates lower than 95-100% suggestive of opportunities for improvement.

Definitions:

Standardized Tool – An assessment tool that has been appropriately validated for the population for which it being used. Examples of tools for patient satisfaction include, but are not limited to: Surgical Consumer Assessment of Health Plans and Systems, which is also approved by the Agency for Health Care Research and Quality.

Patient Satisfaction Assessment – Questionnaires designed to measure a patient's satisfaction with the care that they received from their surgeon.

Data Capture and Calculations:

Calculation for *Performance*

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Performance Numerator (A) Includes:

- Patients who were satisfied with their care within 90 days following cataract surgery

Performance Denominator (PD) Includes:

- All patients aged 18 years and older

AND

- Had cataract surgery

Performance Denominator Exclusions (C) Includes:

A patient is excluded if the following condition(s) exist:

- The patient refuses to participate
- The patient is unable to complete the questionnaire

Performance Calculation

$$\frac{\text{A (\# of patients meeting measure criteria)}}{\text{PD (\# of patients in denominator)} - \text{C (\# of patients with valid denominator exclusions)}}$$

Components for this measure are defined as:

A	# of patients who were satisfied with their care within 90 days following cataract surgery
PD	# of patients aged 18 years and older who had cataract surgery
C	# of patients with documented patient reason for not performing the patient satisfaction assessment within 90 days following cataract surgery

Calculation for Reporting:

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

A. Patients who were satisfied with their care within 90 days following cataract surgery

C.Patients who did not complete a patient satisfaction assessment within 90 days following cataract surgery but for whom there is a documented patient reason for not doing so

D. Patients who did not complete a patient satisfaction assessment within 90 days following cataract surgery and there is no documented patient reason for not doing so

Reporting Denominator (RD) includes:

- Patients aged 18 years and older AND
- Had cataract surgery

Reporting Calculation

$$\frac{\text{A (\# of patients meeting measure criteria) + C (\# of patients with valid exclusions) + D (\# of patients NOT meeting numerator criteria)}}{\text{RD (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who were satisfied with their care within 90 days following cataract surgery
C	# of patients who did not complete a patient satisfaction assessment within 90 days following cataract surgery but for whom there is a documented patient reason for not doing so
D	# of patients who did not complete a patient satisfaction assessment within 90 days following cataract surgery and there is no documented patient reason for not doing so
RD	# of patients aged 18 years and older who had cataract surgery

Measure Specifications - Measure #2 Cataracts: Patient Satisfaction within 90 Days Following Cataract Surgery

Measure specifications will be provided for multiple data sources.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation)

Denominator (Eligible Population): All patients aged 18 years and older who had cataract surgery

- CPT Procedure Codes (with or without modifiers): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984

Numerator: Patients who were satisfied with their care within 90 days following cataract surgery

Report the following CPT Category II code:
_____ - Patient satisfaction achieved within the 90 days following cataract Surgery

Denominator Exclusions: Documentation of patient reason for not completing patient satisfaction assessment within 90 days of cataract surgery

- Append modifier to CPT Category II Code: -2P

B. Registry

Registry reporting requires users to identify the eligible population (denominator) using CPT codes and patient demographics. The numerator options as described in the CPT Category II codes are used to report the numerator of the measure. The CPT Category II codes listed do not need to be submitted for registry-based submissions, however these codes may be submitted for those registries that utilize claims data.

C. Electronic Health Record System (in development)

D. Paper Medical Record (in development)

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