



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 2539

Corresponding Measures:

De.2. Measure Title: Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy

Co.1.1. Measure Steward: Centers for Medicare & Medicaid Services

De.3. Brief Description of Measure: Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of a colonoscopy procedure performed at a hospital outpatient department (HOPD) or ambulatory surgical center (ASC) among Medicare Fee-For-Service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission. The measure is calculated separately for ASCs and HOPDs.

1b.1. Developer Rationale: The goal of this measure is to improve patient outcomes by providing patients, physicians, hospitals, and policy makers with information about facility-level 7-day, risk-standardized hospital visit rates following outpatient colonoscopy.

Colonoscopy is a common and costly procedure performed at outpatient facilities and is frequently performed among relatively healthy patients to screen for colorectal cancer (CRC). Between January 1, 2016 and December 31, 2018, there were 2,258,661 colonoscopies performed in non-federal acute care hospital outpatient departments (HOPDs) and 2,524,898 performed in ambulatory surgical centers (ASCs). Given the widespread use of colonoscopy, understanding and minimizing procedure-related adverse events is a high priority. These adverse events, such as abdominal pain, bleeding, and intestinal perforation, can result in unanticipated hospital visits post procedure, and as outlined in the evidence attachment, a majority (68% in one study) of the reasons for emergency department visits following outpatient colonoscopy are due to the colonoscopy. Furthermore, physicians performing colonoscopies are often unaware that patients seek acute care at hospitals following the procedure and thus underestimate such events. This risk-standardized quality measure addresses this information gap and promotes quality improvement by providing feedback to facilities and physicians, as well as transparency for patients on the rates of and variation across facilities in unplanned hospital visits after colonoscopy.

S.4. Numerator Statement: Unplanned hospital visits within 7 days of a qualifying colonoscopy.

S.6. Denominator Statement: Colonoscopies performed at hospital outpatient departments (HOPDs) and ambulatory surgical centers (ASCs) for Medicare FFS patients aged 65 years and older.

S.8. Denominator Exclusions: We established the following exclusion criteria after reviewing the literature, examining existing measures, discussing alternatives with the working group and technical expert panel (TEP) members, reviewing feedback from the national dry run held in July 2015, and public reporting in 2018 and 2019, and annual re-evaluation of the measure in 2017, 2018, and 2019. The goal was to be as inclusive as possible; we excluded only those high-risk procedures and patient groups for which risk adjustment would not be adequate or for which hospital visits were not typically a quality signal. The exclusions, based on clinical rationales, prevent unfair distortion of performance results.

1) Colonoscopies for patients who lack continuous enrollment in Medicare FFS Parts A and B in the 7 days after the procedure.
Rationale: We exclude these patients to ensure full data availability for outcome assessment.

2) Colonoscopies that occur concurrently with high-risk upper gastrointestinal (GI) endoscopy procedures.
Rationale: Patients undergoing concurrent high-risk upper GI endoscopy procedures, such as upper GI endoscopy procedures for the control of bleeding or treatment of esophageal varices, and have a higher risk profile than typical colonoscopy patients. Therefore, these patients have a disproportionately higher risk for the outcome.

3) Colonoscopies for patients with a history of inflammatory bowel disease (IBD) or diagnosis of IBD at time of index colonoscopy or

on the subsequent hospital visit outcome claim.

Rationale: We exclude these patients because:

- IBD is a chronic condition; patients with IBD undergo colonoscopy both for surveillance due to increased cancer risk and for evaluation of acute symptoms. IBD is likely to be coded as the primary diagnosis prompting the procedure irrespective of whether the patients are undergoing a screening procedure or a diagnostic procedure in the setting of an acute exacerbation of IBD. Therefore, we may not be able to adequately risk adjust for these patients, as we cannot identify relatively well versus acutely unwell patients among visits coded as IBD.
- Our aim is to capture hospital visits which reflect the quality of care. Admissions for acutely ill IBD patients who are evaluated with an outpatient colonoscopy and are subsequently admitted for medical treatment of an IBD flare do not reflect the quality of the colonoscopy. In our 2010 Medicare 20% FFS Full Development Sample (see the 2014 Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy Measure Technical Report posted at https://www.qualitynet.org/files/5d0d37ae764be766b010196e?filename=ClnscopyMsr_TechReport.pdf for full description of the dataset), more than one-third of IBD patients admitted to the hospital with colonoscopy had a discharge diagnosis of IBD, indicating their admission was for medical treatment of their IBD. We therefore excluded this group so that providers who treat a disproportionate number of IBD patients will not be disadvantaged in the measure.
- A post-index diagnosis of IBD, which represents a very small fraction of cases (less than 0.5% of the cohort) in the measure population, indicates that the condition was likely present at the time of the index colonoscopy but not coded.

4) Colonoscopies for patients with a history of diverticulitis or diagnosis of diverticulitis at time of index colonoscopy or on the subsequent hospital visit outcome claim.

Rationale: We exclude these patients because:

- It is unclear what the health status is of patients coded with a history or current diagnosis of diverticulitis, making it difficult to fully risk adjust for patients' health. Colonoscopies performed on patients with a history or current diagnosis of diverticulitis are likely to be coded as diverticulitis as the primary diagnosis irrespective of whether the patients are undergoing a screening procedure or a diagnostic procedure (i.e., are acutely unwell with active disease). Furthermore, the codes for diverticulitis and diverticulosis may not be consistently used; patients with diverticulosis may be erroneously coded as diverticulitis. Therefore, we may not be able to adequately risk adjust as we cannot identify relatively well versus acutely unwell patients among visits coded as diverticulitis.
- Admissions for acutely ill patients with a history or current diagnosis of diverticulitis who are evaluated with an outpatient colonoscopy and are subsequently admitted for medical treatment of do not reflect the quality of the colonoscopy. In our 2010 Medicare 20% FFS Full Development Sample (see the Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy Measure Technical Report posted on the web page provided in data field S.1) more than one-quarter of patients with a history or current diagnosis of diverticulitis admitted to the hospital post colonoscopy had a discharge diagnosis of diverticulitis, indicating they were admitted for medical treatment of the condition. These admissions are likely unrelated to the quality of the colonoscopy. We therefore excluded this group so that providers who treat a disproportionate number of diverticulitis patients will not be disadvantaged in the measure.
- A post-index diagnosis of diverticulitis, which represents a very small fraction of cases (less than 0.5% of the cohort) in the measure population, indicates that the condition was likely present at the time of the index colonoscopy but not coded.

5) Colonoscopies followed by a subsequent outpatient colonoscopy procedure within 7 days.

Rationale: In these situations, the two colonoscopies are considered part of a single episode of care, for which the subsequent colonoscopy is considered the index procedure.

In addition, for colonoscopies performed at HOPDs, we exclude:

6) Colonoscopies that occur on the same day and at the same hospital as an emergency department (ED) visit that is billed on a different claim than the index colonoscopy, unless the ED visit has a diagnosis indicative of a complication of care.

Rationale: It is unclear whether the colonoscopy or ED visit occurred first. If the ED visit is coded with a diagnosis indicative of a complication of care, the measure assumes the ED visit occurred after the colonoscopy procedure and is counted in the measure. It is unlikely that a patient would experience an ED visit for an acute diagnosis at 1 facility and then travel to another facility for a routine colonoscopy on the same day. Accordingly, ED visits billed on the same day as a colonoscopy but at a different facility are included because they likely represent a routine procedure followed by a complication of care.

7) Colonoscopies that are billed on the same hospital claim as an ED visit and that occur on the same calendar day, unless the ED visit has a diagnosis indicative of a complication of care.

Rationale: In these situations, it is not possible to use claims data to determine whether the colonoscopy was the cause of, subsequent to, or during the ED visit. However, if the ED visit is coded with a diagnosis for a complication, the assumption is that it occurred after the colonoscopy procedure.

8) Colonoscopies that are billed on the same hospital outpatient claim and that occur after the ED visit.

Rationale: In these situations, we assume that the colonoscopy was subsequent to the ED visit and may not represent a routine colonoscopy procedure. Timing of the ED visits is determined using revenue center dates from the outpatient claim.

9) Colonoscopies that are billed on the same hospital outpatient claim as an observation stay.

Rationale: In these situations, it is not possible to use claims data to determine whether the colonoscopy was the cause of, subsequent to, or during the observation stay.

De.1. Measure Type: Outcome

S.17. Data Source: Claims, Other

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Dec 23, 2014 Most Recent Endorsement Date: Nov 20, 2020

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? Not applicable. This is not a paired or grouped measure.

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[NQF2539_colonoscopy_evidence_attachment_FINAL_040920.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

Yes

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

The goal of this measure is to improve patient outcomes by providing patients, physicians, hospitals, and policy makers with information about facility-level 7-day, risk-standardized hospital visit rates following outpatient colonoscopy.

Colonoscopy is a common and costly procedure performed at outpatient facilities and is frequently performed among relatively healthy patients to screen for colorectal cancer (CRC). Between January 1, 2016 and December 31, 2018, there were 2,258,661 colonoscopies performed in non-federal acute care hospital outpatient departments (HOPDs) and 2,524,898 performed in ambulatory surgical centers (ASCs). Given the widespread use of colonoscopy, understanding and minimizing procedure-related adverse events is a high priority. These adverse events, such as abdominal pain, bleeding, and intestinal perforation, can result in unanticipated hospital visits post procedure, and as outlined in the evidence attachment, a majority (68% in one study) of the reasons for emergency department visits following outpatient colonoscopy are due to the colonoscopy. Furthermore, physicians

performing colonoscopies are often unaware that patients seek acute care at hospitals following the procedure and thus underestimate such events. This risk-standardized quality measure addresses this information gap and promotes quality improvement by providing feedback to facilities and physicians, as well as transparency for patients on the rates of and variation across facilities in unplanned hospital visits after colonoscopy.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*
Below we describe the distribution of performance on the colonoscopy measure during public reporting, which reflects the measure as specified in this submission. The data below are for a three-year performance period. In the CY2019 final rule, CMS finalized the measure to include three years of performance data (83 FR 58818).

Hospital Outpatient Departments (HOPDs)

Distribution of measure scores for the colonoscopy measure for 2020 public reporting.

Data Source: Medicare FFS claims (Part A and B), January 1, 2016-December 31, 2018

Note: Sample includes all hospital outpatient departments with results

Distribution (percentiles) of the risk-standardized hospital visit rates (RSHVRs) per 1000 colonoscopies, all facilities (n = 4034)

Percentile//7-Day RSHVR

Min//11.67

P10//14.92

P25//15.76

P50//16.38

P75//17.10

P90//18.10

Max//24.27

Mean (SD)//16.47 (1.32)

Distribution (deciles) of the RSHVRs per 1000 colonoscopies, all facilities (HOPDs):

Decile// # facilities//Minimum RSHVR//Maximum RSHVR

1//403//11.67//14.92

2//403//14.92//15.57

3//404//15.57//15.95

4//403//15.95//16.21

5//404//16.21//16.38

6//403//16.38//16.60

7//404//16.60//16.90

8//403//16.90//17.35

9//404//17.35//18.10

10//403//18.10//24.27

Ambulatory Surgery Centers (ASCs)

Distribution of measure scores for the colonoscopy measure for 2020 public comment reporting

Data Source: Medicare FFS claims (Part A and B), January 1, 2016-December 31, 2018

Distribution (percentiles) of the risk-standardized hospital visit rates per 1000 colonoscopies, all facilities (n = 2,261)

Risk-standardized hospital visit rates per 1000 colonoscopies:

Percentile//7-Day RSHVR

Min//8.59

P10//11.07

P25//11.75

P50//12.23

P75//12.82

P90//13.57

Max//17.94

Mean (SD)//12.29 (1.03)

Distribution (deciles) of the RSHVRs per 1000 colonoscopies, all facilities:

Decile// # facilities//Minimum RSHVR//Maximum RSHVR

1//226//8.59//11.07

2//226//11.07//11.58

3//226//11.59//11.88

4//226//11.88//12.08

5//226//12.08//12.23

6//227//12.23//12.41

7//226//12.41//12.65

8//226//12.65//13.02

9//226//13.02//13.57

10//226//13.58//17.94

Change in performance over time:

Hospital Outpatient Departments

The distribution of hospital visit rates among HOPDs declined for 2019 reporting compared to 2018 reporting. This decline may reflect quality improvement as there were no specification changes to the measure for 2019 reporting that would impact rates, nor were there noticeable differences in patient mix. In 2020, CMS started to use three years of data with data dates that overlap with 2018 and 2019 public reporting.

The national rate of hospital visits per 1,000 colonoscopies among HOPDs by year of public reporting was:

2018 public reporting, 2016 data (January 1, 2016-December 31, 2016): 16.4

2019 public reporting, 2017 data (January 1, 2017-December 31, 2017): 14.8

2020 public reporting, 2016-2020 data (January 1, 2016-December 31, 2018): 16.4

Ambulatory Surgery Centers:

The rate of hospital visits following colonoscopies among ASCs reporting declined slightly from 2018 to 2019. The national rate of hospital visits per 1,000 colonoscopies among ASCs by year of public reporting was:

2018 public reporting, 2016 data (January 1, 2016-December 31, 2016): 12.5

2019 public reporting, 2017 data (January 1, 2017-December 31, 2017): 12.3

2020 public reporting, 2016-2020 data (January 1, 2016-December 31, 2018): 12.2

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

Not applicable; we provide performance data above.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (*This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities*)

included.) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

We provide an extensive analysis of disparities in the testing form, section 2b4.4b.

For all social risk factor analyses we used Medicare FFS claims from January 1, 2016-December 31, 2018.

Dual eligible variable:

Distribution of the measure score [hospital visit rates (RSHVRs)] between the first and fourth quartiles, by proportion of dual-eligible patients (for facilities with at least 30 patients):

HOPDs

Characteristic //Duals, 1st quartile ($\leq 2.94\%$)//Non-Duals, 4th quartile ($> 9.89\%$)

Number of HOPDs//894 //895

Number of patients//768,473//336,342

Maximum RSHVR*//21.52//24.27

90th //17.83//18.20

75th //16.98//17.29

Median//16.17//16.53

25th//15.42//15.89

10th//14.39//15.30

*RSHVRs are per 1,000 colonoscopies.

ASCs

Characteristic //Duals, 1st quartile ($\leq 1.09\%$)//Non-Duals, 4th quartile ($> 5.35\%$)

Number of ASCs//518//519

Number of patients//70,7563//393,510

Maximum RSHVR*//16.02//17.15

90th//13.26//13.64

75th //12.68//12.86

Median//12.08//12.26

25th//11.58//11.76

10th//10.99//11.16

Minimum RSHVR//9.05//8.59

AHRQ SES variable:

Distribution of the measure score [hospital visit rates (RSHVRs)] between the first and fourth quartiles, for the proportion of patients with the low AHRQ SES variable (for facilities with at least 30 patients):

HOPDs

Characteristic//Low AHRQ SES, 1st quartile ($\leq 5.38\%$)//Low AHRQ SES, 4th quartile ($> 26.47\%$)

Number of HOPDs//896//894

Number of patients//659,707//307,490

Maximum RSHVR*//20.86//24.27

90th//17.81//18.31

75th//16.93//17.35

Median//16.19//16.56

25th//15.50//15.95

10th//14.40//15.47

Minimum RSHVR//11.87//12.91

ASCs

Characteristic//Low AHRQ SES, 1st quartile (<=3.96%)//Low AHRQ SES, 4th quartile (>16.84%)

Number of ASCs//519//518

Number of patients//665512//488590

Maximum RSHVR//16.2//17.15

90th//13.33//13.76

75th//12.59//13.04

Median//12.03//12.34

25th//11.45//11.79

10th//10.79//11.09

Minimum RSHVR//8.94//8.59

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

Not applicable. Data on disparities are presented above.

2. Reliability and Validity—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. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Gastrointestinal (GI)

De.6. Non-Condition Specific(check all the areas that apply):

Safety, Safety : Complications, Screening

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Elderly, Populations at Risk

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

Measure Methodology: <https://www.qualitynet.org/outpatient/measures/colonoscopy/methodology>

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [Colonoscopy_Measure_Data_Dictionary_v2019a.xlsx](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure **Attachment:**

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

Yes

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

Changes made in 2017

Changes made in 2017 are described in more detail in the following report:

https://www.qualitynet.org/files/5d0d38ed764be766b0102e71?filename=2017_Colonoscopy_AUS_Report.pdf

1. Applies to HOPDs only. Expansion of same outpatient claim ED visit exclusion to include colonoscopies matched to inpatient claims with ED visits, except for those with a primary diagnosis on the facility claim that is a complication of care as defined by four AHRQ CCS categories.

Rationale: The measure previously excluded colonoscopies that are billed on the same hospital outpatient claim as an ED visit and those that occur on the same day and at the same hospital as an ED visit that is billed on a different claim than the index colonoscopy, since it is not possible to determine the order of events in these situations. The 3-day rule cases are similar to those that are excluded using the two existing ED-related exclusions, except that the Part B colonoscopy claim was matched to an inpatient claim instead of an outpatient claim. During the dry run and throughout the 2016 CDR release cycle, facilities noted rare instances in which the measure was counting ED visit outcomes that occurred before the colonoscopy procedure. A review of the top facility diagnosis codes for these cases indicated that a portion of them are clear complications of care, while the rest are ambiguous in terms of indicating whether the colonoscopy happened before or after the ED visit. This targeted exclusion ensures that the measure will continue to include cases with ED visits for clear complications of care, but also minimizes the number of cases we include that began with an ED visit.

2. Applies to HOPDs only. Revised current ED-related exclusions to be consistent with the new exclusion described above, and to align with ED-related exclusions in Hospital Visits after Hospital Outpatient Surgery (OP-36), to only exclude colonoscopies on the same claim or on the same day and at the same facility as an ED visit, if the facility claim does not have a diagnosis that indicates a complication.

Rationale: While we cannot determine the order of events in these cases, we are keeping cases with facility diagnoses that indicate a complication of care, in order to ensure that the measure captures its intended outcome. This change aligned all colonoscopy ED-related exclusions for consistency within the measure and with Hospital Visits after Hospital Outpatient Surgery (OP-36).

3. Modification of the planned admission algorithm to align with appropriate changes signaled during ICD-10 code testing and review.

Rationale: First, the algorithm was aligned with version 4.0 (ICD-10) of CMS's Planned Readmission Algorithm (PRA) used in the hospital inpatient readmission measures and the 2017 ACO admission measures. Next, additional ICD-10-PCS and ICD-10-CM codes were removed or added, as appropriate to the colonoscopy measure, following review of new FY2017 codes and general equivalence mappings.

Changes made in 2018

Changes made in 2018 are described in more detail in the following report:

https://www.qualitynet.org/files/5d0d3704764be766b0100ec0?filename=2018_Colonoscopy_AnIUpdtRpt.pdf

1. Modification of the planned admission algorithm (PAA) to align with changes made to CMS's PRA version 4.0_2019.

Rationale: These changes improve the accuracy of the algorithm.

2. Applies to HOPDs only. Modification of the list of AHRQ CCS categories used to define complications of care for ED visit exclusions.

Rationale: The list of AHRQ CCS categories used to identify complications of care in the same claim/same day ED visit exclusions was modified and expanded to include an ICD-10 diagnosis code. The changes were made to improve the accuracy of the measure and ensure that it captures complications of care following low-risk colonoscopies.

In the CY2019 Final Rule (83 FR 58818), CMS extended the performance period for the colonoscopy measure to 3 years.

Changes made in 2019:

We provide this information in greater detail in than for the 2018 and 2017 changes because the updated report is not yet available on QualityNet. The updated report should be available to the public in January 2020 at the following URL:

<https://www.qualitynet.org/outpatient/measures/colonoscopy/methodology>.

1.Modification of the PAA to align with changes made to CMS's Planned Readmission Algorithm version 4.0 2020.

For this update, we studied the 2019 versions of the AHRQ CCS for diagnoses and procedures, respectively, to determine how the newly implemented ICD-10 codes in the 2018 code set were categorized, and to examine any code shifts that may have occurred from the previous version of the AHRQ CCS to the most recent AHRQ CCS. Review of these versions of the AHRQ CCS was extensive, and included:

- Examination of seven AHRQ CCS diagnosis categories and 13 AHRQ CCS procedure categories to determine how the newly implemented ICD-10 codes should be incorporated into the Planned Readmission Algorithm specifications; and,
- Examination of one AHRQ CCS diagnosis category and eight AHRQ CCS procedure categories that shifted to investigate where code shifts may affect the specialty cohort definitions and Planned Readmission Algorithm.

We then solicited input from clinical and measure experts to confirm the clinical appropriateness of the AHRQ CCS categorization of the newly implemented ICD-10 codes and any changes warranted due to the code shifts that occurred. The experts also reviewed the newly implemented ICD-10 codes in the FY 2019 version of the ICD-10-CM/PCS to determine which, if any, should be added to the singular ICD-10 code lists that are also used in the algorithm (conditions that are not captured by AHRQ CCS categories). The intent was to maintain the clinical integrity of the algorithm.

Changes for potentially planned procedures included:

- The addition of four AHRQ CCS procedure categories (Procedure CCS 96, 118, 162, 163), which consisted of procedures that clinicians deemed potentially planned. Examples of these categories are "Other OR lower GI therapeutic procedures" (CCS 96) and "Other OR therapeutic procedures on joints" (CCS 162). We previously included subsets of ICD-10-PCS codes within CCS 96, 118, and 163 on the potentially planned procedures list.
- The addition of selected ICD-10-PCS codes within CCS group 112 ("Other OR therapeutic procedures of urinary tract").
- The removal of CCS 95 ("Other non-OR lower GI therapeutic procedures") and 174 ("Other non-OR therapeutic procedures on skin subcutaneous tissue fascia and breast") as a whole; we previously included a subset of codes on the potentially planned procedures list.
- An additional 14 CCS categories were previously specified for Colonoscopy, including CCS 70, 72, 73, 75, 76, 77, 90, 92, 93, 95, 96, 97, 98, and 194 in the 2018 reporting cycle (v4.0_2019 PAA). These codes were carried into the current v4.0_2020 PAA.

Changes in acute diagnoses included:

- An additional five ICD-10-CM codes were specified for colonoscopy within CCS106 ("Dysrhythmia") and CCS 155 ("Other gastrointestinal disorders") in the 2018 reporting cycle (v4.0_2019 PAA). These codes were carried into the current v4.0_2020 PAA.

The complete set of codes reflected in the v4.0_2020 Planned Readmission Algorithm adopted as the PAA for the colonoscopy measure are available in the data dictionary tables: tabs "Colonos PAA PA1 Always Plnd Px", "Colonos PAA PA2 Always Plnd Dx", "Colonos PAA PA3 Pot Plnd Px" and "Colonos PAA PA4 Acute Dx".

Rationale: These changes align with the specifications of similar measures and improve the accuracy of the algorithm

2. Update to exclusion for surgeries that are billed on the same hospital claim as an ED visit and that occur on the same calendar day, unless the ED visit has a diagnosis indicative of a complication of care.

With this update, we further refine the same-claim ED exclusion. Prior to this update, surgeries billed on the same claim as an ED visit were excluded from the measure, unless the claim had a diagnosis indicating a complication of care occurred. This update further refines this exclusion to exclude surgeries that occur on the same day and on the same claim as the surgery, unless there is a diagnosis of complication of care indicated on the claim. Additionally, we expand the exclusion criteria to exclude surgeries that are billed on the same hospital outpatient claim, but occur after the ED visit, regardless of whether complications of care are billed or

not. Note that this update was applied prior to the release of 2020 reporting to be responsive to stakeholder feedback.

Rationale: In these situations, it is not possible to use claims data to determine whether the surgery was the cause of, subsequent to, or during the ED visit. However, if the ED visit is coded with a diagnosis for a complication, the assumption is that it occurred after the surgery.

3. Update to exclusion for surgeries that are billed on the same hospital outpatient claim and that occur after the ED visit.

Rationale: In these situations, we assume that the surgery was subsequent to the ED visit and may not represent a routine surgery. Timing of the ED visits is determined using revenue center dates from the outpatient claim.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Unplanned hospital visits within 7 days of a qualifying colonoscopy.

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Outcome Definition

The outcome for this measure is all-cause, unplanned hospital visits within 7 days of an outpatient colonoscopy. Hospital visits include ED visits, observation stays, and unplanned inpatient admissions. If more than one unplanned hospital visit occurs, only the first hospital visit within the outcome timeframe is counted in the outcome.

Identification of Planned Admissions

The measure outcome includes any inpatient admission within the first 7 days after the colonoscopy, unless that admission is deemed a “planned” admission as defined by the measure’s PAA. The Centers for Medicare & Medicaid Services (CMS) seeks to count only unplanned admissions in the measure outcome, because variation in “planned” admissions does not reflect quality differences. We based the PAA on the CMS PRA Version 4.0_2019, which CMS created for its hospital-wide readmission measure. In brief, the algorithm identifies admissions that are typically planned and may occur after the patient’s index event. The algorithm always considers a few specific, limited types of care planned (e.g., major organ transplant, rehabilitation, or maintenance chemotherapy). Otherwise, the algorithm defines a planned admission as a non-acute admission for a scheduled procedure (e.g., total hip replacement or cholecystectomy), and the algorithm never considers admissions for acute illness or for complications of care planned. For example, the algorithm considers hip replacement unplanned if hip fracture (an acute condition) is the discharge diagnosis, but planned if osteoarthritis (a non-acute condition) is the discharge diagnosis. The algorithm considers admissions that include potentially planned procedures with acute diagnoses or that might represent complications of a colonoscopy unplanned and thus counts these admissions in the measure outcome.

For more information about the PAA, please see the Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy Measure 2018 Measure Updates and Specifications Report posted on the web page provided in data field S.1. Also see sheets ‘PAA PA1 always planned Px’, ‘PAA PA2 always planned Dx’, ‘PAA PA3 post planned Px’, and ‘PAA PA4 acute Dx’ in the attached Data Dictionary for the most up-to-date sets of codes in the algorithm for ‘always planned procedures’ (PA1), ‘always planned diagnoses’ (PA2), ‘potentially planned procedures’ (PA3), and ‘acute’ diagnoses (PA4).

Definition of ED and Observation Stay

We defined ED visits and observation stays using one of the specified billing codes or revenue center codes identified in Medicare Part B Outpatient hospital claims. The codes that define ED visits and observation stays are in the attached Data Dictionary, sheet “Colons_Outcome_ED_Obs.”

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

Colonoscopies performed at hospital outpatient departments (HOPDs) and ambulatory surgical centers (ASCs) for Medicare FFS

patients aged 65 years and older.

S.7. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Target Population

The measure includes colonoscopies performed at HOPDs and ASCs. The measure calculates a facility-level score for all eligible facilities separately for HOPDs, and ASCs.

The target population is patients aged 65 years and older who have a colonoscopy, to screen for colorectal cancer, biopsy or remove pre-cancerous lesions, or evaluate non-emergent symptoms and signs of disease. We limited the measure cohort to patients who are 65 and older, enrolled in Medicare FFS, and have been enrolled in Part A and Part B Medicare for the 12 months prior to the date of procedure since national data linking risk factors, procedures, and outcomes across care settings are only available for this group.

Eligible colonoscopies were identified using specified Current Procedural Terminology (CPT)/Healthcare Common Procedure Coding System (HCPCS) procedure codes in the Medicare Carrier (Part B Physician) Standard Analytical File (SAF). The CPT and HCPCS procedure codes that define the cohort are in the attached Data Dictionary, sheet “Colonos_Cohort.”

We considered all colonoscopy codes during development of the measure cohort. We did not include in the measure colonoscopy CPT procedure codes that reflected fundamentally higher-risk or different procedures. Those procedures billed with a qualifying colonoscopy procedure code and a high-risk colonoscopy procedure code (see attached Data Dictionary, sheet “Colonos_Excl”) were not included in the measure.

Colonoscopy is not possible among patients who have had a prior total colectomy. Any claim for a colonoscopy in a patient with a prior total colectomy is therefore likely to be a coding error. We perform an error check to ensure the measure does not include these patients with a total colectomy recorded in their prior medical history. The CPT and HCPCS procedure codes and International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM codes that define the total colectomy data reliability check are in the attached Data Dictionary, sheet “Colonos_Excl.”

Capture of Colonoscopies Affected by the Medicare 3-Day Payment Window Policy:

Colonoscopies performed at HOPDs can be affected by the Medicare 3-day payment window policy. The policy states that outpatient services (including all diagnostic services such as colonoscopy) provided by a hospital or any Part B entity wholly owned or wholly operated by a hospital (such as an HOPD) in the three calendar days preceding the date of a beneficiary’s inpatient admission are deemed to be related to the admission [1]. For outpatient colonoscopies affected, the facility claim (for the technical portion of the colonoscopy) is bundled with the inpatient claim, although the Medicare Part B physician claim for professional services rendered is still submitted. This policy has implications for the measure because it may lead to: (1) failure to completely capture outpatient colonoscopies performed at HOPDs; and (2) underreporting of outcomes for colonoscopies performed in the HOPD setting.

To ensure the capture of HOPD colonoscopies, we identify physician claims for colonoscopy in the HOPD setting from Medicare Part B claims, which had an inpatient admission within three days and lacked a corresponding HOPD facility claim. We then attribute the colonoscopies identified as affected by this policy to the appropriate HOPD facility using the facility provider ID from the inpatient claim.

Citations

1. Centers for Medicare & Medicaid Services (CMS). Three Day Payment Window. 2013; http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Three_Day_Payment_Window.html

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

We established the following exclusion criteria after reviewing the literature, examining existing measures, discussing alternatives with the working group and technical expert panel (TEP) members, reviewing feedback from the national dry run held in July 2015, and public reporting in 2018 and 2019, and annual re-evaluation of the measure in 2017, 2018, and 2019. The goal was to be as

inclusive as possible; we excluded only those high-risk procedures and patient groups for which risk adjustment would not be adequate or for which hospital visits were not typically a quality signal. The exclusions, based on clinical rationales, prevent unfair distortion of performance results.

1) Colonoscopies for patients who lack continuous enrollment in Medicare FFS Parts A and B in the 7 days after the procedure.

Rationale: We exclude these patients to ensure full data availability for outcome assessment.

2) Colonoscopies that occur concurrently with high-risk upper gastrointestinal (GI) endoscopy procedures.

Rationale: Patients undergoing concurrent high-risk upper GI endoscopy procedures, such as upper GI endoscopy procedures for the control of bleeding or treatment of esophageal varices, and have a higher risk profile than typical colonoscopy patients. Therefore, these patients have a disproportionately higher risk for the outcome.

3) Colonoscopies for patients with a history of inflammatory bowel disease (IBD) or diagnosis of IBD at time of index colonoscopy or on the subsequent hospital visit outcome claim.

Rationale: We exclude these patients because:

- IBD is a chronic condition; patients with IBD undergo colonoscopy both for surveillance due to increased cancer risk and for evaluation of acute symptoms. IBD is likely to be coded as the primary diagnosis prompting the procedure irrespective of whether the patients are undergoing a screening procedure or a diagnostic procedure in the setting of an acute exacerbation of IBD. Therefore, we may not be able to adequately risk adjust for these patients, as we cannot identify relatively well versus acutely unwell patients among visits coded as IBD.
- Our aim is to capture hospital visits which reflect the quality of care. Admissions for acutely ill IBD patients who are evaluated with an outpatient colonoscopy and are subsequently admitted for medical treatment of an IBD flare do not reflect the quality of the colonoscopy. In our 2010 Medicare 20% FFS Full Development Sample (see the 2014 Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy Measure Technical Report posted at https://www.qualitynet.org/files/5d0d37ae764be766b010196e?filename=ClnscopyMsr_TechReport.pdf for full description of the dataset), more than one-third of IBD patients admitted to the hospital with colonoscopy had a discharge diagnosis of IBD, indicating their admission was for medical treatment of their IBD. We therefore excluded this group so that providers who treat a disproportionate number of IBD patients will not be disadvantaged in the measure.
- A post-index diagnosis of IBD, which represents a very small fraction of cases (less than 0.5% of the cohort) in the measure population, indicates that the condition was likely present at the time of the index colonoscopy but not coded.

4) Colonoscopies for patients with a history of diverticulitis or diagnosis of diverticulitis at time of index colonoscopy or on the subsequent hospital visit outcome claim.

Rationale: We exclude these patients because:

- It is unclear what the health status is of patients coded with a history or current diagnosis of diverticulitis, making it difficult to fully risk adjust for patients' health. Colonoscopies performed on patients with a history or current diagnosis of diverticulitis are likely to be coded as diverticulitis as the primary diagnosis irrespective of whether the patients are undergoing a screening procedure or a diagnostic procedure (i.e., are acutely unwell with active disease). Furthermore, the codes for diverticulitis and diverticulosis may not be consistently used; patients with diverticulosis may be erroneously coded as diverticulitis. Therefore, we may not be able to adequately risk adjust as we cannot identify relatively well versus acutely unwell patients among visits coded as diverticulitis.
- Admissions for acutely ill patients with a history or current diagnosis of diverticulitis who are evaluated with an outpatient colonoscopy and are subsequently admitted for medical treatment of do not reflect the quality of the colonoscopy. In our 2010 Medicare 20% FFS Full Development Sample (see the Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy Measure Technical Report posted on the web page provided in data field S.1) more than one-quarter of patients with a history or current diagnosis of diverticulitis admitted to the hospital post colonoscopy had a discharge diagnosis of diverticulitis, indicating they were admitted for medical treatment of the condition. These admissions are likely unrelated to the quality of the colonoscopy. We therefore excluded this group so that providers who treat a disproportionate number of diverticulitis patients will not be disadvantaged in the measure.
- A post-index diagnosis of diverticulitis, which represents a very small fraction of cases (less than 0.5% of the cohort) in the measure population, indicates that the condition was likely present at the time of the index colonoscopy but not coded.

5) Colonoscopies followed by a subsequent outpatient colonoscopy procedure within 7 days.

Rationale: In these situations, the two colonoscopies are considered part of a single episode of care, for which the subsequent colonoscopy is considered the index procedure.

In addition, for colonoscopies performed at HOPDs, we exclude:

- 6) Colonoscopies that occur on the same day and at the same hospital as an emergency department (ED) visit that is billed on a different claim than the index colonoscopy, unless the ED visit has a diagnosis indicative of a complication of care.
Rationale: It is unclear whether the colonoscopy or ED visit occurred first. If the ED visit is coded with a diagnosis indicative of a complication of care, the measure assumes the ED visit occurred after the colonoscopy procedure and is counted in the measure. It is unlikely that a patient would experience an ED visit for an acute diagnosis at 1 facility and then travel to another facility for a routine colonoscopy on the same day. Accordingly, ED visits billed on the same day as a colonoscopy but at a different facility are included because they likely represent a routine procedure followed by a complication of care.
- 7) Colonoscopies that are billed on the same hospital claim as an ED visit and that occur on the same calendar day, unless the ED visit has a diagnosis indicative of a complication of care.
Rationale: In these situations, it is not possible to use claims data to determine whether the colonoscopy was the cause of, subsequent to, or during the ED visit. However, if the ED visit is coded with a diagnosis for a complication, the assumption is that it occurred after the colonoscopy procedure.
- 8) Colonoscopies that are billed on the same hospital outpatient claim and that occur after the ED visit.
Rationale: In these situations, we assume that the colonoscopy was subsequent to the ED visit and may not represent a routine colonoscopy procedure. Timing of the ED visits is determined using revenue center dates from the outpatient claim.
- 9) Colonoscopies that are billed on the same hospital outpatient claim as an observation stay.
Rationale: In these situations, it is not possible to use claims data to determine whether the colonoscopy was the cause of, subsequent to, or during the observation stay.

S.9. Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

- 1) Colonoscopies for patients who lack continuous enrollment in Medicare FFS Parts A and B in the 7 days after the procedure. Lack of continuous enrollment in Medicare FFS for 7 days after the procedure is determined by patient enrollment status in FFS Parts A and B using the Medicare Enrollment Database. The enrollment indicators must be appropriately marked for the month(s) which fall within 7 days of the procedure date.
- 2) Colonoscopies that occur concurrently with high-risk upper GI endoscopy procedures.
The list of the CPT codes for the upper GI endoscopy procedures identified as “high-risk” are in attached Data Dictionary, sheet “Colonos_Excl”
- 3) Colonoscopies for patients with a history of IBD or diagnosis of IBD at time of index colonoscopy or on the subsequent hospital visit outcome claim.
The ICD-9-CM and ICD-10-CM codes that define IBD are in the attached Data Dictionary, sheet “Colonos_Excl.”
- 4) Colonoscopies for patients with a history of diverticulitis or diagnosis of diverticulitis at time of index colonoscopy or on the subsequent hospital visit outcome claim.
The ICD-9-CM and ICD-10-CM codes that define diverticulitis are in the attached Data Dictionary, sheet “Colonos_Excl.”
- 5) Colonoscopies followed by a subsequent outpatient colonoscopy procedure within 7 days.
For cases in which a colonoscopy is followed by another colonoscopy within 7 days, the measure will use the subsequent colonoscopy as the index colonoscopy.

The following are in addition to those above, but only for HOPDs:

- 6) Colonoscopies that occur on the same day and at the same hospital as an ED visit that is billed on a separate claim than the index colonoscopy, unless the ED visit has a diagnosis indicative of a complication of care.
The billing and revenue center codes that define ED visits are in the attached Data Dictionary, sheet “Colonos_Outcome_ED_Obs.” The same facility is defined as having the same CMS Certification Number (CCN). Complications of care codes (shown in tab “Colons_Excl_ED_CoC” include the following AHRQ CCS categories: AHRQ CCS 257 – Other aftercare; AHRQ CCS 238 – Complications

of surgical procedures or medical care; AHRQ CCS 2616 - Adverse effects of medical care; AHRQ CCS 2617 - Adverse effects of medical drugs; and ICD-10-CM G89.18 – Other acute postprocedural pain.

7) Colonoscopies that are billed on the same hospital claim as an ED visit and that occur on the same calendar day, unless the ED visit has a diagnosis indicative of a complication of care.

The billing and revenue center codes that define ED visits are in the attached Data Dictionary, sheet “Colonos_Outcome_ED_Obs.” Complications of care codes (shown in tab “Colons_Excl_ED_CoC” include the following AHRQ CCS categories: AHRQ CCS 257 – Other aftercare; AHRQ CCS 238 – Complications of surgical procedures or medical care; AHRQ CCS 2616 - Adverse effects of medical care; AHRQ CCS 2617 - Adverse effects of medical drugs; and ICD-10-CM G89.18 – Other acute postprocedural pain.

8) Colonoscopies that are billed on the same hospital outpatient claim and that occur after the ED visit.

The billing and revenue center codes that define ED visits are in the attached Data Dictionary, sheet “Colonos_Outcome_ED_Obs.”

9) Colonoscopies that are billed on the same hospital outpatient claim as an observation stay.

The billing and revenue center codes that define observation stays are in the attached Data Dictionary, sheet “Colonos_Outcome_ED_Obs.”

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

N/A. This measure is not stratified.

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

Statistical risk model

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Lower score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

The measure is calculated separately for HOPDs and ASCs.

1. Identify colonoscopies meeting the inclusion criteria described above in S.7.

2. Exclude procedures meeting any of the exclusion criteria described above in S.9.

3. Identify and create a binary (0/1) flag for an unplanned hospital visit within 7 days of the colonoscopy described above in Section S.5.

4. Use patients’ historical and index procedure claims data to create risk adjustment variables.

5. Fit a hierarchical generalized linear model (HGLM) to produce a ratio of the number of “predicted” hospital visits to the number of “expected” hospital visits for each facility, given its case mix. The HGLM is adjusted for clinical risk factors that vary across patient populations, are unrelated to quality, and influence the outcome.

6. Multiply the ratio estimated in step 3 by the observed national 7-day hospital visit rate to obtain a risk-standardized hospital visit (RSHV) rate for each facility.

7. Use bootstrapping to construct a 95% confidence interval estimate for each facility's RSHV rate.

For more information about the measure methodology, please see the Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy 2018 Measure Updates and Specifications Report posted on the web page provided in data field S.1.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

N/A

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

N/A

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Claims, Other

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Medicare administrative claims and enrollment data

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Outpatient Services

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

Not applicable

2. Validity – See attached Measure Testing Submission Form

Colonoscopy_nqf_testing_attachment_V3_FINAL_010520.docx

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not

prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

Yes - Updated information is included

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for maintenance of endorsement.

ALL data elements are in defined fields in electronic claims

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For maintenance of endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

This is a claims-based measure, data is generated during the course of billing. There have been no difficulties regarding data collection, availability of data, missing data, etc. Because completion of claims is required for hospital reimbursement, there is little missing data. The measures do not require any additional data collection and offer no data collection burden to facilities.

This measure has been through a confidential reporting period, as well as three years of public reporting. There have been no reports of difficulties with data collection from stakeholders during this time.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk

model, programming code, algorithm).

There are no fees, licenses or other requirements needed to use this measure as specified.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

Program Name, Sponsor: Hospital Outpatient Quality Reporting (HOQR) Program, CMS

Implemented by CMS for outpatient services, the Hospital OQR is a national pay for quality data reporting program mandated by the Tax Relief and Health Care Act of 2006. This act requires hospitals to submit data on measures on the quality of care furnished by hospitals in outpatient settings. The HOQR program provides hospitals with a financial incentive to report their quality of care measure data and CMS with data to help Medicare beneficiaries make more informed decisions about their health care. The measure includes all short-term acute care hospitals with eligible colonoscopies (excluding PPS-exempt cancer hospitals). For the final cohorts from January 1, 2016 – December 31, 2018, there were 2,258,661 colonoscopies performed in 4034 HOPDs, representing about 91% of all eligible colonoscopies.

Program Name, Sponsor: Ambulatory Surgical Center Quality Reporting (ASCQR) Program CMS

The ASCQR Program is a national pay-for-reporting, quality data program finalized by CMS under which ASCs report quality of care data for standardized measures to receive the full annual update to their ASC annual payment rate. Measured entities include all ambulatory surgical centers with eligible colonoscopies. For the final cohort from January 1, 2016 – December 31, 2018 there were 2,524,898 procedures performed across 2,261 ASCs, representing 93.4% of all eligible colonoscopies.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

Not applicable. This measure is publicly reported.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

Not applicable; this measure is publicly reported.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

In July 2015, CMS held a dry run of the colonoscopy measure. The primary goals of the dry run were to educate HOPD and ASC facilities about the measure in advance of its use in public reporting, allow facilities to review data and results, provide facilities with the opportunity to ask questions about the measure, and to test the measure production process. All open facilities that had at least one qualifying colonoscopy for the measure during the performance period were provided with Facility-Specific Reports (FSRs) containing their measure results and detailed patient-level data. Additionally, claims detail reports (CDRs) were made available to facilities at three stages (September and December of 2017, and March of 2018) prior to the final measure calculation and public reporting of measure results. The CDRs provided facilities subject to the measure with information on their colonoscopy cases that would be included in the measure calculation for January 2019 public reporting. Facilities were also provided with information to help them understand the measure, interpret their data and measure results, and facilities could comment on or ask questions through an email Question & Answer (Q&A) inbox.

During the dry run, measure results were confidentially reported to 4,069 HOPDs and 1,160 ASCs with active QualityNet Secure Portal accounts. Of these, 2,955 (72.6%) HOPDs and 580 (50.0%) ASCs downloaded their reports.

For 2019 public reporting, measure results were reported to 3791 HOPDs and 1327 ASCs; reports were downloaded by 2480 HOPDs (65%) and 443 ASCs (33.4%). For 2020 public reporting, measure results were reported to 4190 HOPDs and 1097 ASCs; reports were downloaded by 2915 HOPDs (69.6%) and 326 ASCs (29.7%).

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

A dry run is a preliminary analysis of data in which facilities may review their measure results and ask questions about and become familiar with the measure methodology. The 2015 dry run consisted of a 30-day period of confidential reporting (from July 1 to July 31, 2015) during which facilities had the opportunity to review their measure results and the data used in measure calculation. Two national provider calls were held to provide further information on the measure and answer questions.

In anticipation of public reporting in January 2019, CMS provided facilities with interim reports with their cases and outcomes for confidential review. Facilities were provided with three interim claims-detail reports, and in October 2018 they were provided with a full facility-specific report with their results and all cases for the 2017 performance period.

For public reporting, in January 2020, CMS provided facilities with their facility-specific reports with their results and all included cases for the performance period (January 1, 2016-December 31, 2018).

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

Stakeholder feedback was obtained during the dry run national provider calls and the dry run email Q&A period. Feedback continues to be gathered through email Q&A.

4a2.2.2. Summarize the feedback obtained from those being measured.

Before and during the dry run, CMS received 437 emails (478 including follow-up questions) via the colonoscopy measure email inbox. Facilities asked for assistance interpreting their patient-level data, asked questions about the measure methodology, and in a small number of cases, flagged findings in their report that seemed inconsistent with the methodology. The topics of the questions and comments raised during the national provider calls were similar to those received by email.

A wide variety of question topics were received in the measure inbox during the dry run period. The most common types of questions were inquiries about specific cases in facilities' data (40%), followed by requests for assistance accessing the FSR on the QualityNet website (23%), questions about the dry run process or the national provider calls (16%), and general methods questions (15%).

Facilities' careful review of patient data identified a number of situations that suggest the need to make minor refinements to the

measure methodology to ensure: (a) the algorithm for processing claims data accurately identifies cases for inclusion in the measure; and (b) the planned admission algorithm captures additional planned hospital visits.

Specifically:

The feedback identified several types of patient cases that may not have been properly identified and classified by the measure algorithms in the claims data:

- The patient was in observation status before the colonoscopy was performed, but the measure counted the observation stay as an unplanned hospital visit following the colonoscopy. Hospitals identified situations in which a patient was placed into observation status before the colonoscopy, either to evaluate acute symptoms such as a GI bleeding or to complete the preparation for the procedure. These were situations in which the colonoscopy and observation stay were billed on the same outpatient claim.
- The hospital visit was planned but was still counted in the measure outcome. Stakeholders reported cases for which they considered the follow-up hospital visits to be planned, but those visits were counted in the measure outcome. These included situations where the admission was (1) for treatment to address an issue found during the colonoscopy (such as cancer); (2) a planned procedure (such as colectomy, ileostomy take-down, and rectopexy) for which the colonoscopy was part of the pre-operative workup; and (3) a planned surgery unrelated to the colonoscopy (such as renal artery stent surgery).
- The colonoscopy was performed while the patient was a hospital inpatient. Stakeholders identified situations where a colonoscopy was performed after the patient was in inpatient status, but the case was included in the measure as an outpatient colonoscopy with a hospital admission outcome.
- The colonoscopy was performed after an ED visit on the same day. These situations involved an ED visit and a colonoscopy billed on separate claims on the same day. The colonoscopy was not excluded from the measure.
- The colonoscopy was performed at another facility or a different procedure was performed. In these situations, facilities notified CMS of instances in which a procedure attributed to their facility was performed at another facility, or that their records indicated that a procedure other than a qualifying colonoscopy was performed.
- There were cases that facilities felt should have been excluded, but were not. Facilities questioned why certain cases were not excluded for a history of diverticulitis or IBD or for a concurrent upper GI endoscopy.

Summary of Questions or Comments from Hospitals submitted through the Q & A process:

For the Colonoscopy measure inquiries received from hospitals since January 2018 have included the following:

1. Requests for clarification of how inclusion and exclusion criteria are applied; and
2. Requests for interpretation and clarification of results.
3. Questions about the characterization of specific procedures as planned or unplanned.

4a2.2.3. Summarize the feedback obtained from other users

We have not received feedback from other users.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

Each year issues raised through the Q&A or in the literature related to this measure are considered by measure and clinical experts. Any issues that warrant additional analytic work due to potential changes in the measure specifications are addressed as a part of annual measure reevaluation. If small changes are indicated after additional analytic work is complete, those changes are usually incorporated into the measure in the next measurement period. If the changes are substantial CMS may propose the changes through rulemaking and adopt the changes only after CMS received public comment on the changes and finalizes those changes in the OPDS or other rule.

The current measure specifications submitted with this application reflect the information gathered during the dry run and was used for measure implementation for the calendar year 2020 payment determination for the HOQR and ASCQR programs. These updates are discussed in detail in section S.3.2 and include: 1) Modification of the PAA to align with changes made to CMS's Planned Readmission Algorithm version 4.0 2020, 2) Update to exclusions for surgeries: excluding surgeries that occur on the same day and

on the same claim as the colonoscopy, unless there is a diagnosis of complication of care indicated on the claim, and excluding colonoscopies that are billed on the same hospital outpatient claim, but occur after the ED visit, regardless of whether complications of care are billed or not. For more information about these updates, please see the Facility 7-day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy 2019 (version 5.0) Measure Updates and Specifications Report posted on the web page provided in data field S.1.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

As mentioned above in section 1.b2, hospital visit rates among HOPDs declined for 2019 reporting compared to 2018 (from 16.4 per 1000 cases in 2018 reporting to 14.8 per 1000 cases in 2019 reporting). The distribution of risk-standardized rates also declined for HOPDs; the interquartile range of rates for 2019 reporting lie completely below the 2018 interquartile range. This decline may reflect quality improvement as there were no large specification changes to the measure for 2019 reporting that would impact rates, nor were there noticeable differences in patient mix. Hospital visit rates did not decline between 2019 and 2020 public reporting, but this is likely due to a change in the measure methodology, which now uses data from January 1, 2016 through December 31, 2018, and therefore the performance data between the two public reporting periods overlap.

There was a small decline in the hospital visit rates for ASCs across the three public reporting years (2018, 2019, 2020). Historically, CMS engagement with ASCs has been lower than with hospitals. For example, about 33% of ASCs (443 of 1327 facilities) downloaded a facility-specific report containing their performance data in October 2018, compared with about 65% of HOPDs (2480 of 3791 facilities).

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

We have encountered no unexpected findings during implementation, including unintended impacts on patients.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

We have identified no unexpected benefits.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0658 : Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients

2687 : Hospital Visits after Hospital Outpatient Surgery

3357 : Facility-Level 7-Day Hospital Visits after General Surgery Procedures Performed at Ambulatory Surgical Centers
3510 : Screening/Surveillance Colonoscopy

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

Yes

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

We identified two colonoscopy-related measures that are currently endorsed by NQF. One (NQF 0658) is a process measure that identifies the percentage of patients aged 50 years to 75 years who received a screening colonoscopy and who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report. The second measure (NQF 3510) is a cost measure. Both measures are process measures related to screening, and while both measures address colonoscopy, these measures differ from the CMS colonoscopy measure, which is an outcome measure. More information on each of the related colonoscopy measures is provided below. 1. NQF 0034: Colorectal Cancer Screening (electronic clinical quality measure [eCQM]): Identifies the proportion of patients in the recommended age group for colonoscopy screenings (50-75) who have had the procedure. NQF 0034 focuses on colonoscopy screening in patients aged 50-75, therefore the targeted population overlaps with the CMS colonoscopy measure and reflects overall screening guidelines. The CMS colonoscopy outcome measure's purpose is to measure outcomes from colonoscopy procedures in Medicare-aged patients. 2. NQF 3510: Screening/Surveillance Colonoscopy The Screening/Surveillance Colonoscopy cost measure evaluates clinicians' risk-adjusted cost to Medicare for beneficiaries who receive this procedure and includes costs of services that are clinically related to the attributed clinician's role in managing care for 14 days from the "trigger" of the episode. NQF 3510 has the same target population (Medicare beneficiaries) and would capture the physician-controlled costs related to hospital visits identified in the CMS colonoscopy measure. The timeframe for the two measures differs (7 days for the outcome measure vs. 14 days for the cost measure), and the level of measurement differs (facility-level for the outcome measure, and clinician or group level for the cost measure). We also identified two related NQF-endorsed outcome measures: 1. NQF 3357: Facility-Level 7-Day Hospital Visits after General Surgery Procedures Performed at ASCs (ASC General Surgery), and 2. NQF 2687: Hospital Visits after Hospital Outpatient Surgery (HOPD Surgery). The outcome of both measures is the same as CMS's colonoscopy measure presented in this re-endorsement application; an unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission. Hence, these related measures target the same quality domains as the CMS colonoscopy measure. The patient cohort is also somewhat similar in that the related measures target Medicare Fee-For-Service (FFS) patients aged 65 years and older. The cohorts however, have no overlap with the colonoscopy measure, because they include patients undergoing surgical procedures, not colonoscopy. The CMS colonoscopy measure is a claims-based measure, therefore any differences in measure specifications create no burden to facilities as the measures are calculated from data produced during the billing process. In terms of interpretability, the CMS colonoscopy measure is an outcome measure, and therefore is conceptually distinct from the process measure and the cost measure; the cost measure also targets a different level of measurement (provider, not facility). The outcome for the CMS colonoscopy measure is harmonized with the related NQF-endorsed outcome measures for these settings (ASCs/HOPDs), as discussed in section 5a1.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Not applicable. There are no competing measures, only related measures.

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

Attachment **Attachment:** [Colonoscopy_Measure_Appendix_FINAL_02-21-14.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Centers for Medicare & Medicaid Services](#)

Co.2 Point of Contact: [Helen, Dollar-Maples, Helen.Dollar-Maples@cms.hhs.gov, 410-786-7214-](#)

Co.3 Measure Developer if different from Measure Steward: [Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation \(CORE\)](#)

Co.4 Point of Contact: [Elizabeth, Drye, elizabeth.drye@yale.edu, 203-764-5700-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Throughout measure development, we obtained expert and stakeholder input through holding regular discussions with the external experts in our working group, consulting our national TEP, and holding a 30-day public comment period.

Yale New Haven Health Services Corporation—Center for Outcomes Research and Evaluation (CORE) clinicians as well as two national clinical leaders in the field of gastroenterology comprised the working group. Through regular in-person meetings and teleconferences, the working group discussed all aspects of measure development, including the cohort and outcome definitions, and risk adjustment.

External Working Group members were:

[John Allen, MD, MBA, Clinical Chief of Gastroenterology and Hepatology, Yale School of Medicine President Elect, American Gastroenterological Association](#)

[Ronald Vender, MD](#)

[Professor of Medicine \(Digestive Diseases\) and Associate Dean for Clinical Affairs, Yale School of Medicine Chief Medical Officer, Yale Medical Group Immediate Past President, American College of Gastroenterology](#)

In addition to the working group and in alignment with the CMS Measures Management System, we convened a TEP to provide input and feedback during measure development from a group of recognized experts in relevant fields. To convene the TEP, we released a public call for nominations and selected individuals to represent a range of perspectives including clinicians, patients, and individuals with experience in quality improvement, performance measurement, and healthcare disparities. We held three structured TEP conference calls consisting of presentation of key issues, our proposed approach, and relevant data, followed by open discussion among TEP members. We made minor modifications to the measure specifications (e.g., outcome definition) based on TEP feedback on the measure.

List of TEP Members

1) [Joel Brill, MD; Predictive Health LLC \(Chief Medical Officer\); Fair Health \(Medical Director\)](#)

2) [Zahid Butt, MD; Medisolv Inc. \(CEO\)](#)

3) [David Chang, PhD, MPH, MBA; University of California San Diego \(Director of Outcomes Research, Assistant Professor, Department of Surgery\)](#)

4) [Richard Dutton, MD, MBA; Anesthesia Quality Institute \(Executive Director\)](#)

5) [Brian Fennerty, MD; Oregon Health and Science University \(Professor of Medicine, Department of Internal Medicine, Section of](#)

<p>Gastroenterology)</p> <p>6) Terry Golash, MD; Aetna, Inc. (Senior Medical Director)</p> <p>7) Claudia Gruss, MD; Arbor Medical Group, a division of ProHealth (Physician Partner)</p> <p>8) Cynthia Ko, MD, MS; University of Washington (Associate Professor, Division of Medicine; Adjunct Associate Professor, Department of Health Services)</p> <p>9) David Lieberman, MD; Oregon Health and Science University (Professor of Medicine; Chief, Division of Gastroenterology and Hepatology)</p> <p>10) Keith Metz, MD, JD, MSA; Great Lakes Surgical Center (Medical Director)</p> <p>11) Michael Morelli, MD, CPE; Indianapolis Gastroenterology and Hepatology (President)</p> <p>12) Philip Schoenfeld, MD, MEd, MSc; University of Michigan (Professor of Medicine, Division of Gastroenterology)</p> <p>13) Anthony Senagore, MD, MS, MBA; Central Michigan University, School of Medicine (Chair, Surgical Disciplines)</p> <p>14) Joan Warren, PhD; Applied Research Program, NIH, National Cancer Institute (Epidemiologist)</p> <p>15) Jennifer Weiss, MD, MS; University of Wisconsin School of Medicine and Public Health (Assistant Professor, Department of Medicine – Division of Gastroenterology & Hepatology)</p> <p>16, 17) Two patients</p>
<p>Measure Developer/Steward Updates and Ongoing Maintenance</p> <p>Ad.2 Year the measure was first released: 2014</p> <p>Ad.3 Month and Year of most recent revision: 11, 2019</p> <p>Ad.4 What is your frequency for review/update of this measure? Annual</p> <p>Ad.5 When is the next scheduled review/update for this measure? 11, 2020</p>
<p>Ad.6 Copyright statement: Not applicable</p> <p>Ad.7 Disclaimers: Not applicable</p>
<p>Ad.8 Additional Information/Comments: Not applicable</p>