



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 #: 0225

Corresponding Measures:

De.2. Measure Title: At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer

Co.1.1. Measure Steward: Commission on Cancer, American College of Surgeons

De.3. Brief Description of Measure: Percentage of patients, age ≥ 18 and ≤ 120 at diagnosis, who have their first diagnosis of cancer (epithelial malignancy), whose primary tumor is of the colon, and had at least 12 regional lymph nodes removed and pathologically examined for resected colon cancer

1b.1. Developer Rationale: Improve the utilization of removing and pathologically examining at least 12 regional lymph nodes for resected colon cancer

S.4. Numerator Statement: At least 12 regional lymph nodes are removed and pathologically examined

S.6. Denominator Statement: Include if all of the following characteristics are identified:

Men or women

Age ≥ 18 and ≤ 120 at time of diagnosis

Any sequence of malignant primary tumor

Epithelial malignancy only

Invasive tumors

Primary tumors of the colon

All or part of 1st course of treatment performed at the reporting facility

Surgical procedure of the primary site at the reporting facility

S.8. Denominator Exclusions: Exclude, if any of the following characteristics are identified:

Under age 18 or over 120 at time of diagnosis

Tumor not originating in the colon

Non-epithelial malignancies

Non-invasive tumors

Stage 0, in-situ tumor

Stage IV, metastatic tumor

None of 1st course therapy performed at reporting facility

No surgical procedure of the primary site at the reporting facility

Perforation of the primary site

Acute obstruction

Positive FNA; nodes removed surgically were negative due to neo-adjuvant chemo

De.1. Measure Type: Process

S.17. Data Source: Registry Data

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Mar 01, 2007 **Most Recent Endorsement Date:** Oct 26, 2016

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

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

[RLN_evidence.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.

No

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.

[Improve the utilization of removing and pathologically examining at least 12 regional lymph nodes for resected colon cancer](#)

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.*

The nationally recognized National Cancer Database (NCDB), jointly sponsored by the American College of Surgeons and the American Cancer Society, is a clinical oncology database sourced from hospital registry data that are collected in about 1,500 Commission on Cancer (CoC)-accredited facilities. NCDB data are used to analyze and track patients with malignant neoplastic diseases, their treatments, and outcomes. Data represent approximately 71 percent of newly diagnosed colon, excluding rectum, cancer cases nationwide and 37million historical records. This analysis uses NCDB data.

The NCDB collects data from CoC accredited cancer programs on an annual basis; the data we collect is in accordance with standard registry procedures. In January of 2019, 2016 diagnoses were processed and included in the data warehouse. As of this submission, 2017 diagnoses were not yet processed. Therefore the CoC does not begin surveying or holding programs accountable for their performance rates until the year after it is released to ensure adequate adjuvant therapy information has been documented. To be consistent with the cohort of cases used for all treatment measures, 2016 data were not included.

In 2008, 37,196 cases in 1,479 facilities were in the denominator and the mean estimated performance rate (EPR) was 81.7% (Std.=0.4). IQR=21.2% (70.7%-91.9%), minimum=0.0%, maximum=100.0%. In 2015, 42,360 cases in 1,348 facilities were in the denominator and the mean estimated performance rate (EPR) was 92.1% (Std.=0.3). IQR=12.5% (87.5%-100.0%), minimum=0.0%, maximum=100.0%.

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

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.*

The data source is described in 1b.2. Disparities shown in demographic comparisons using EPRs were assessed by sex, race/ethnicity, age at diagnosis, insurance status, income and education at the zip code level, facility type, and census region.

Sex

Sex was defined as male or female. For both males and females, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 10.9% for males and 10.1% for females. In 2015 the lowest EPR was males (91.6%, 95% CI: 91.2%-92.0%, n=20,708), and the highest EPR was females (92.6%, 95% CI: 92.2%-92.9%, n=21,652). In 2008 the lowest EPR was males (80.7%, 95% CI: 80.1%-81.3%, n=17,626), and the highest EPR was females (82.5%, 95% CI: 82.0%-83.0%, n=19,570).

Race/Ethnicity

Race/ethnicity was defined as non-Hispanic white, non-Hispanic black, Asian/Hawaiian/Pacific Islander, Hispanic or other/unknown. In all race/ethnicity groups, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 10.4% for non-Hispanic white, 9.8% for non-Hispanic black, 10.9% for Asian/Hawaiian/Pacific Islander, 10.6% for Hispanic, and 11.5% for other/unknown. In 2015 the lowest EPR was non-Hispanic black (90.4%, 95% CI: 89.6%-91.3%, n=4,960), followed by Hispanic (92.1%, 95% CI: 91.0%-93.1%, n=2,445), non-Hispanic whites (92.3%, 95% CI: 92.0%-92.6%, n=32,052), Asian/Hawaiian/Pacific Islander (92.4%, 95% CI: 91.0%-93.9%, n=1,292), and the highest EPR was other/unknown (92.8%, 95% CI: 91.5%-94.1%, n=1,611). In 2008 the lowest EPR was non-Hispanic black (80.6%, 95% CI: 79.3%-81.8%, n=4,075), followed by other/unknown (81.3%, 95% CI: 80.0%-82.7%, n=3,320), Asian/Hawaiian/Pacific Islander (81.5%, 95% CI: 78.9%-84.1%, n=849), Hispanic (81.5%, 95% CI: 79.7%-83.3%, n=1,819), and the highest EPR was non-Hispanic whites (81.9%, 95% CI: 81.4%-82.3%, n=27,133).

Age at Diagnosis

Age at diagnosis was defined as 18-49, 50-59, 60-69, 70-79 or 80+. In all age groups, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 6.2% for 18-49, 10.1% for 50-59, 10.4% for 60-69, 11.1% for 70-79 and 11.4% for 80+. In 2015 the lowest EPR was 80+ (91.0%, 95% CI: 90.5%-91.6%, n=10,107), followed by 60-69 (91.9%, 95% CI: 91.4%-92.4%, n=10,610), 70-79 (92.0%, 95% CI: 91.5%-92.5%, n=11,305), 50-59 (92.4%, 95% CI: 91.8%-93.1%, n=6,864), and the highest EPR was 18-49 (95.5%, 95% CI: 94.9%-96.2%, n=3,474). In 2008 the lowest EPR was 80+ (79.6%, 95% CI: 78.8%-80.4%, n=9,369), followed by 70-79 (80.9%, 95% CI: 80.1%-81.7%, n=9,912), 60-69 (81.5%, 95% CI: 80.7%-82.3%, n=8,582), 50-59 (82.3%, 95% CI: 81.4%-83.3%, n=6,199), and the highest EPR was 18-49 (89.3%, 95% CI: 88.2%-90.4%, n=3,134).

Insurance Status

Insurance status was defined as insurance at the time of diagnosis as not insured/Medicaid, private, Medicare, other government and other/unknown. In all insurance status groups, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 10.2% for not insured/Medicaid, 9.6% for private, 11.1% for Medicare, 11.1% for other government, and 10.9% for other/unknown. In 2015 the lowest EPR was other government (91.1%, 95% CI: 88.2%-93.9%, n=380), followed by Medicare (91.6%, 95% CI: 91.2%-91.9%, n=24,897), other/unknown (92.2%, 95% CI: 89.9%-94.6%, n=516), not insured/Medicaid (92.6%, 95% CI: 91.6%-93.6%, n=2,736), and the highest EPR was private (93.0%, 95% CI: 92.6%-93.4%, n=13,831). In 2008 the lowest EPR was other government (80.0%, 95% CI: 75.0%-85.0%, n=250), followed by Medicare (80.5%, 95% CI: 80.0%-81.1%, n=21,421), other/unknown (81.3%, 95% CI: 77.8%-84.9%, n=466), not insured/Medicaid (82.4%, 95% CI: 80.5%-84.3%, n=1,608), and the highest EPR was private (83.4%, 95% CI: 82.8%-84.0%, n=13,451).

Median Income Quintile

Median income quintiles was defined as <\$36,000, \$36,000-\$43,999, \$44,000-\$52,999, \$53,000-\$68,999, \$69,000+ or other/unknown, based on the 2012 American Community Survey at the zip code level. In all median income quintiles, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 11.3% for <\$36,000, 11.3% for \$36,000-\$43,999, 10.0% for \$44,000-\$52,999, 10.2% for \$53,000-\$68,999, 9.8% for \$69,000+, and 15.9% for other/unknown. In 2015 the lowest EPR was <\$36,000 (90.7%, 95% CI: 90.0%-91.4%, n=5,847), followed by \$36,000-\$43,999 (91.3%, 95% CI: 90.7%-92.0%,

n=7,592), \$44,000-\$52,999 (91.9%, 95% CI: 91.3%-92.5%, n=8,421), \$53,000-\$68,999 (92.4%, 95% CI: 91.9%-92.9%, n=10,102), \$69,000+ (93.4%, 95% CI: 92.9%-93.8%, n=10,270), and the highest EPR was other/unknown (94.5%, 95% CI: 90.6%-98.5%, n=128). In 2008 the lowest EPR was other/unknown (78.6%, 95% CI: 74.4%-82.8%, n=364), followed by <\$36,000 (79.4%, 95% CI: 78.3%-80.5%, n=5,182), \$36,000-\$43,999 (80.0%, 95% CI: 79.0%-80.9%, n=6,711), \$44,000-\$52,999 (81.9%, 95% CI: 81.0%-82.8%, n=7,368), \$53,000-\$68,999 (82.2%, 95% CI: 81.4%-83.0%, n=8,798), and the highest EPR was \$69,000+ (83.6%, 95% CI: 82.8%-84.4%, n=8,773).

Median Education Quartile

Median education quartile was defined as <7.0% with no high school degree, 7.0%-12.9%, 13.0%-20.9%, 21.0%+ or other/unknown, based on the 2012 American Community Survey at the zip code level. In all median education quintiles, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 9.1% for <7.0%, 10.5% for 7.0%-12.9%, 10.4% for 13.0%-20.9%, 12.1% for 21.0%+, and 19.9% for other/unknown. In 2015 the lowest EPR 13.0%-20.9% (91.5%, 95% CI: 90.9%-92.0%, n=11,142), followed by 21.0%+ (91.6%, 95% CI: 90.9%-92.2%, n=7,527), 7.0%-12.9% (92.2%, 95% CI: 91.7%-92.6%, n=13,800), <7.0% (93.1%, 95% CI: 92.6%-93.6%, n=9,794), and the highest EPR was other/unknown (97.9%, 95% CI: 95.1%-100.0%, n=97). In 2008 the lowest EPR was other/unknown (78.0%, 95% CI: 73.5%-82.4%, n=336), followed by 21.0%+ (79.5%, 95% CI: 78.5%-80.4%, n=6,443), 13.0%-20.9% (81.1%, 95% CI: 80.3%-81.8%, n=9,605), 7.0%-12.9% (81.7%, 95% CI: 81.0%-82.4%, n=12,111), and the highest EPR was <7.0% (84.0%, 95% CI: 83.2%-84.8%, n=8,701).

Facility Type

Facility type was defined by program's CoC-accreditation status as academic cancer programs, community cancer programs, comprehensive community cancer programs, integrated network cancer programs, NCI & PPS-Exempt cancer programs and other/unknown cancer programs. In all facility types, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 8.8% for academic cancer programs, 13.0% for community cancer programs, 10.8% for comprehensive community cancer programs, 7.2% for integrated network cancer programs, 4.8% for NCI & PPS-Exempt cancer programs, and 12.2% for other/unknown cancer programs. In 2015 the lowest EPR was other/unknown cancer programs (87.4%, 95% CI: 83.2%-91.7%, n=231), followed by community cancer programs (89.3%, 95% CI: 88.5%-90.2%, n=5,352), comprehensive community cancer programs (91.9%, 95% CI: 91.5%-92.2%, n=20,884), integrated network cancer programs (92.4%, 95% CI: 91.6%-93.2%, n=4,643), academic cancer programs (93.3%, 95% CI: 92.8%-93.8%, n=8,618), and the highest EPR was NCI & PPS-Exempt cancer programs (95.7%, 95% CI: 94.9%-96.5%, n=2,632). In 2008 the lowest EPR was other/unknown cancer programs (75.2%, 95% CI: 73.6%-76.7%, n=2,923), followed by community cancer programs (76.3%, 95% CI: 75.0%-77.5%, n=4,404), comprehensive community cancer programs (81.1%, 95% CI: 80.5%-81.7%, n=16,609), academic cancer programs (84.5%, 95% CI: 83.6%-85.3%, n=6,600), integrated network cancer programs (85.2%, 95% CI: 84.2%-86.2%, n=4,999), and the highest EPR was NCI & PPS-Exempt cancer programs (90.9%, 95% CI: 89.5%-92.3%, n=1,661).

Census Region

Census Region was defined as Northeast, South, Midwest, West, Pacific or missing/out of US. In all census regions, EPRs were higher in 2015 than in 2008. The differences in EPRs from 2008 to 2015 were as follows: 9.9% for Northeast, 10.6% for South, 9.2% for Midwest, 9.7% for West, 14.1% for Pacific, and 10.5% for missing/out of US. In 2015 the lowest EPR was missing/out of US (89.5%, 95% CI: 83.8%-95.1%, n=114), followed by South (91.0%, 95% CI: 90.6%-91.5%, n=16,285), West (91.9%, 95% CI: 90.6%-93.2%, n=1,727), Midwest (92.4%, 95% CI: 91.9%-92.9%, n=11,035), Pacific (93.2%, 95% CI: 92.5%-93.9%, n=4,874), and the highest EPR was Northeast (93.3%, 95% CI: 92.8%-93.8%, n=8,325). In 2008 the lowest EPR was missing/out of US (79.0%, 95% CI: 68.9%-89.2%, n=62), followed by Pacific (79.1%, 95% CI: 77.9%-80.3%, n=4,320), South (80.4%, 95% CI: 79.7%-81.0%, n=13,863), West (82.2%, 95% CI: 80.4%-84.1%, n=1,588), Midwest (83.2%, 95% CI: 82.5%-84.0%, n=9,722), and the highest EPR was Northeast (83.4%, 95% CI: 82.5%-84.2%, n=7,641).

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

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): Cancer, Cancer : Colorectal
De.6. Non-Condition Specific (check all the areas that apply): Care Coordination, Disparities Sensitive
De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any): Elderly
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.) See pages 9-14: https://www.facs.org/~media/files/quality%20programs/cancer/ncdb/measure%20specs%20colon.ashx
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) No data dictionary Attachment:
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. The following changes are due to the American Joint Committee on Cancer (AJCC) 8th edition staging manual, the Commission on Cancer's Standards for Oncology Registry Entry (STORE) coding manual and North American Association of Central Cancer Registry (NAACCR) updates and applies to cases diagnosed on and after January 1, 2018: Stageable epithelial tumors histology [NAACCR Item# 522] = 8010, 8013, 8020, 8041, 8070, 8140, 8213, 8246, 8265, 8480, 8490, 8510, 8560, 8000, 8481 AJCC clinical stage group [NAACCR Item# 1004] ? 0, 4A, 4B, 4C AJCC pathologic stage group [NAACCR Item# 1014] ? 0, 4A, 4B, 4C

AJCC clinical M [NAACCR Item# 1003] ? cM1, cM1a, cM1b, cM1c, pM1, pM1a, pM1b, pM1c

AJCC pathological M [NAACCR Item# 1013] ? cM1, cM1a, cM1b, cM1c, pM1, pM1a, pM1b, pM1c

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).

At least 12 regional lymph nodes are removed and pathologically examined

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).

Regional lymph nodes are examined [NAACCR Item# 830] = 12-90

AND

Regional lymph nodes examined [NAACCR Item# 830] = regional lymph nodes positive [NAACCR Item# 820]

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

Include if all of the following characteristics are identified:

Men or women

Age >= 18 and <= 120 at time of diagnosis

Any sequence of malignant primary tumor

Epithelial malignancy only

Invasive tumors

Primary tumors of the colon

All or part of 1st course of treatment performed at the reporting facility

Surgical procedure of the primary site at the reporting facility

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).

Sex [NAACCR Item# 220] = 1, 2

Age [NAACCR Item# 230] = 18 and = 120

Any sequence of malignant primary cancer diagnosis [NAACCR Item# 560] = 00-59, 99

Stageable epithelial tumor ICD-O codes in the AJCC 8th Edition staging manual [NAACCR Item# 522] = 8010, 8013, 8020, 8041, 8070, 8140, 8213, 8246, 8265, 8480, 8490, 8510, 8560, 8000, 8481

Invasive tumor behavior [NAACCR Item# 523] = 3

Primary tumors of the colon [NAACCR Item# 400] = C18.0, C18.2, C18.3, C18.4, C18.5, C18.6, C18.7, C18.8, C18.9

AJCC clinical stage group [NAACCR Item# 1004] ? 0, 4A, 4B, 4C

AJCC pathologic stage group [NAACCR Item# 1014] ? 0, 4A, 4B, 4C

AJCC clinical M [NAACCR Item# 1003] ? cM1, cM1a, cM1b, cM1c, pM1, pM1a, pM1b, pM1c

AJCC pathological M [NAACCR Item# 1013] ? cM1, cM1a, cM1b, cM1c, pM1, pM1a, pM1b, pM1c

All or part of 1st course of treatment performed at the reporting facility [NAACCR Item# 610] = 10, 11, 12, 13, 14, 20, 21, 22

Surgical procedure of the primary site at the reporting facility [NAACCR Item# 670] = 30-80

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

Exclude, if any of the following characteristics are identified:

Under age 18 or over 120 at time of diagnosis

Tumor not originating in the colon

Non-epithelial malignancies

Non-invasive tumors

Stage 0, in-situ tumor

Stage IV, metastatic tumor

None of 1st course therapy performed at reporting facility

No surgical procedure of the primary site at the reporting facility

Perforation of the primary site

Acute obstruction

Positive FNA; nodes removed surgically were negative due to neo-adjuvant chemo

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.)

See pages 9-14: <https://www.facs.org/~media/files/quality%20programs/cancer/ncdb/measure%20specs%20colon.ashx>

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.)

No stratification applied

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

No risk adjustment or risk stratification

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 = Higher 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.)

See pages 9-14: <https://www.facs.org/~media/files/quality%20programs/cancer/ncdb/measure%20specs%20colon.ashx>

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.

Not Applicable

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.

Not Applicable

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

If other, please describe in S.18.

Registry Data

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.

Hospital cancer registry data, reported to the American College of Surgeons' Commission on Cancer, National Cancer Database

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)

Inpatient/Hospital

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

[RLN_testing-637233262748635719.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.

Yes

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.

No - This measure is not risk-adjusted

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.

Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

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.

Some data elements are in defined fields in electronic sources

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).

The National Cancer Database (NCDB) captures colon data from 1,420 hospitals across the US with measure-eligible cases from 2014-2015. The availability and usage of electronic health records will vary by hospital. All data elements from accredited institutions are required to be submitted to the NCDB in electronic format following a nationally standardized set of data specifications from the North American Association of Cancer Registries. All accredited hospitals use data abstraction software.

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.

1) The technical infrastructure to generate and report compliance with this measure has been in place since 2005 for approximately 1,500 Commission on Cancer (CoC) accredited centers performance rates for this measure. This measure is currently reported to CoC accredited programs through the National Cancer Database (NCDB) using the Cancer Program Practice Profile Report (CP3R) web-based audit and feed-back reporting tool by registrars submitting new and updated cases annually. In addition, this measure is also reported to 1,500 cancer programs participating in its "real clinical time" feedback reporting tool through its Rapid Quality Reporting System (RQRS) reported daily from registrars in regards to new and updated cases. Both of these reporting tools have been utilized in the cancer registry community and do not produce an undue burden on the data collection network. Also when questions arise about coding or the reporting systems they can consult with NCDB staff via email.

2) The data for this measure are key elements already collected in all hospital registries. This measure has been reviewed using cancer registry data. The CoC data demonstrates variation in the measure. The measure is readily implemented.

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).

The Commission on Cancer charges an annual accreditation fee to each hospital and includes access to the National Cancer Database and the quality measure reporting tools for no additional charge. The accreditation fee covers the resources needed for measure development as well as the infrastructure used to report the measures.

Above the accreditation fee, hospitals must cover the cost of maintaining a registry, certified tumor registry staff, and abstraction software to submit data to the NCDB. It should be noted that there are State requirements for reporting cancer cases that would already necessitate the costs of maintaining a registry and collecting many of the same data items.

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)
	<p>Public Reporting Pennsylvania Health Care Quality Alliance http://www.phcqa.org/ Pennsylvania Health Care Quality Alliance http://www.phcqa.org/</p> <p>Regulatory and Accreditation Programs Commission on Cancer Standards https://www.facs.org/quality-programs/cancer/coc/standards Commission on Cancer Standards https://www.facs.org/quality-programs/cancer/coc/standards</p> <p>Quality Improvement (Internal to the specific organization) Cancer Program Practice Profile Reports https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/cp3r Cancer Quality Improvement Program https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/cqip Rapid Quality Reporting System https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/rqrs</p>

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

d) Public Reporting

Name: Pennsylvania Health Care Quality Alliance (PHCQA)

Purpose: PHCQA is a voluntary group of health care organizations collaboratively working together to improve the quality of health care for the people of Pennsylvania. PHCQA developed a consensus-driven, statewide approach to hospital quality measurement that is supported by quality of care data from a variety of public data sources. It is believed that by sharing aggregated quality performance data openly through public reporting on the Internet, valuable, objective health care quality information can be provided for all consumers. At the same time best practices can be identified and shared to improve the performance of all stakeholders. Commission on Cancer (CoC) accredited cancer programs in Pennsylvania may elect to voluntarily report their estimated performance rates through this program, currently 60 of 73 (82.19%) CoC Pennsylvania programs are participating.

Geographic area: Pennsylvania

Level of measurement and setting: hospital level, Pennsylvania cancer hospitals

f) Quality Improvement with Benchmarking

Name: Commission on Cancer, National Cancer Database

Purpose: The National Cancer Database (NCDB) provides a venue for accredited programs to benchmark their compliance compared to other CoC-accredited cancer programs through the use of the Cancer Program Practice Profile Reports (CP3R), the Rapid Quality Reporting System (RQRS) and the Cancer Quality Improvement Program (CQIP). CP3R, available to about 1,500 CoC-accredited cancer programs, offers local providers comparative information to assess adherence to and consideration of standard of care therapies for major cancer (see more at: <https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/cp3r>). CQIP reports annual quality and outcomes data to about 1,500 cancer programs accredited by the American College of Surgeons CoC and provides the availability for programs to benchmark their performance on quality measures to other CoC-accredited programs (see more at: <https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/cqip>). RQRS is a reporting and quality improvement tool which provides real clinical time assessment of hospital level adherence to National Quality Forum (NQF)-endorsed quality of cancer care measures for breast and colorectal cancers (see more at: <https://www.facs.org/quality-programs/cancer/ncdb/qualitytools/rqrs>).

Geographic area: National

Level of measurement and setting: hospital level, CoC cancer programs

g) Regulatory and Accreditation

Name: Commission on Cancer (CoC) Standards

Purpose: The CoC accredits cancer programs and in order to fulfil or maintain accreditation, programs must adhere to requirements called the CoC's Standards. Within these standards there are multiple requirements that incorporate reviewing and maintain performance rates for CoC's quality measures. For instance, Standard 5.2 requires cancer programs to participate in Rapid Quality and Reporting System (RQRS), which allows programs to review real-time clinical care and receives alerts to ensure patients' treatment are compliant with this measures. Additionally, Standards 1.2/4.3 requires each program to have a Cancer Liaison Physician (CLP) and some of the responsibility of a CLP includes reviewing CP3R, RQRS and CQIP four times a year, which includes reviewing this measure, and to discuss the findings with the cancer committee. Standard 4.5 applies to the measure with an expected performance rate of 85%.

Geographic area: National

Level of measurement and setting: hospital level, CoC cancer programs

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

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

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.

Cancer measures are developed in a multi-disciplinary setting. Clinical leadership panels work with statisticians, business analysts,

and registrars to measure developers to ensure the measures are 1) clinically relevant and 2) have adequate NCDB data to support their development. Ongoing maintenance is addressed in 4a2.3. Cancer data collection through registries is uniform throughout North America. Cancer registries utilize the North American Association of Central Cancer Registries (NAACCR). NAACCR develops and promotes uniform data standards for cancer registration and certifies population-based registries among other important work to reduce the burden of cancer in North America. Data collected through the National Cancer Database (NCDB) utilizes NAACCR standard formats and editing functionality. The CoC-accredited programs file submissions are passed through an edits program to ensure the data meet acceptable quality standards. Cases with errors must be reviewed and resubmitted.

To improve capture of adjuvant therapy reported to the NCDB, the CoC-accredited programs receive individual case information regarding the quality measures supported by the CoC. This notification includes the status of the case (i.e., not eligible, concordant, non-concordant and incomplete) and any potentially missing treatment information needed for calculating the performance rates (PRs). All CoC-accredited facilities receive a report of their performance rates on this measure through the Cancer Program Practice Profile (CP3R) and an estimated performance rate on the Rapid Quality Reporting System (RQRS), a real clinical time decision support system. In 2013, the Commonwealth of Pennsylvania began reporting performance rates on this measure for 72% (52 of 72) of the CoC-accredited hospitals in Pennsylvania. That number of reporting hospitals has risen to 87.5% (63 of 72) of the Commonwealth's hospitals (7/01/2019).

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.

The Web-based Cancer Program Practice Profile Report (CP3R) offers local providers comparative information to assess adherence to and consideration of standard of care therapies for this measure, and provides a platform from which to promote continuous practice improvement aimed to improve quality of patient care at the local level. This tool also permits hospitals to compare their care for these patients relative to that of other providers. The aim is to empower clinicians, administrators, and other staff to work cooperatively and collaboratively to identify problems in practice and delivery and to implement best practices that will diminish disparities in care across Commission on Cancer (CoC)-accredited cancer programs. This tool is updated annually. A quality related audit is initiated for any of the accountability measures, which this measure is considered. The CoC CQIP reflects an annual snapshot of the quality measures contained in CP3R. The Rapid Quality Reporting System (RQRS) is a reporting and quality improvement tool for this measure. This tool provides real clinical time assessment of hospital-level adherence to measure and provides alerts for upcoming adjuvant therapy for patients affected by this measure. The RQRS has been available to all Commission on Cancer (CoC)-accredited cancer programs beginning September 2011. As of January 2017, RQRS participation is required for all CoC-accredited programs. RQRS is updated every 24 hours. Additionally, on the CoC's website there are explanations/user documentation for CP3R, RQRS and CQIP.

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.

Our facilities have fostered the development of the CP3R, commenting on the design of the feedback to facilitate utilization of the tools. The RQRS was developed and based on survey results from alpha and beta testers. Design issues continue to be addressed as to how best to capture forthcoming adjuvant therapy.

As this measure is distributed, if any questions about the calculation of the measure or inquiry regarding the numerator/denominator are asked, programs will submit questions through the NCDB mailbox. The User Support Specialists monitor this mailbox and answer these questions. Content related questions are sent to the Colon Site Specific Leaders (SSLs), who are renown clinical experts on colon cancer.

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

CP3R/CQIP: Our registrars and physicians review the measures through phone calls and e-mails. Our surveyors inform the CoC of potential problems that the measure may encounter. As issues are identified, slight modifications will be made; e.g., excluding patients on related clinical trials. The same feedback may be obtained from CQIP, an annual snapshot of the CP3R measures.

RQRS: The responses have been positive. For example, a hospital administrator has stated that he had better physician recruiting with the implementation of this clinical data support system that alerts providers of adjuvant therapy for their patients. Further, an often heard comment is that RQRS has "prevented patients from slipping through the cracks" as the first course of treatment can last a year.

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

The Pennsylvania Health Care Alliance (PHCQA) approached the CoC to support voluntary hospital reporting of clinical measures on

their website (<http://www.phcqa.org/>). The CoC provides the means for data collection through the annual call for data. Calculations are made and sent to the hospitals, who have stated that they wish to participate in this voluntary reporting of their performance on the measure. Upon agreement by these hospitals, the NCDB sends the Performance Rates to the PHCA for posting on the website. In 2013, the Commonwealth of Pennsylvania began reporting performance rates on this measure for 72% (52 of 72) of the CoC-accredited hospitals in Pennsylvania. That number of reporting hospitals has risen to 87.5% (63 of 72) of the Commonwealth's hospitals (7/01/2019).

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.

Site-specific leaders, who are expert clinicians in the care of colon cancer patients, are notified of any potential issues that have been identified in the calculation of this measure. They review the measure for current practice and potential impact of any clinical trials that may impact the measure. Identified issues are communicated to the CoC and changes, if needed, are incorporated into the measure logic. The CoC-accredited hospitals are notified if changes are made and why.

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.

Performance has increased over time since implementation and across patient subgroups. The aggregate compliance rate was 81.7% in 2008 and had risen to 92.1% in 2015. Differences in compliance across race groups has largely disappeared with the exception of non-Hispanic Black which had risen to 90.4% in 2015 still 2% lower than other racial groups.

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.

This measure, as specified, is unlikely to be systematically susceptible to under-reporting due to the integral dependence of the measure upon information routinely documented and reported following pathologic examination of colon tissue specimens.

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

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.
No

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

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?

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

[Not Applicable](#)

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](#)

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.

[No appendix Attachment:](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Commission on Cancer, American College of Surgeons](#)

Co.2 Point of Contact: [Bryan, Palis, bpalis@facs.org, 312-202-5436-](#)

Co.3 Measure Developer if different from Measure Steward: [Commission on Cancer, American College of Surgeons](#)

Co.4 Point of Contact: [Bryan, Palis, bpalis@facs.org, 302-202-5436-](#)

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.

[Original Developers: Christopher \(Chris\) Pezzi, MD, FACS \(Abington Memorial Hospital, Abington PA\); Lawrence Shulman, MD \(Dana Farber Cancer Institute, Boston MA\); Stephen Edge, MD, FACS \(Roswell Park Cancer Institute, Buffalo NY\); Richard Swanson, MD, FACS \(Partners Health Care, Boston MA\); Peter Enzinger, MD \(Dana Farber Cancer Institute, Boston MA\); Elin Sigurdson, MD, FACS \(Fox Chase Cancer Center, Philadelphia PA\); Mitchell Posner, MD, FACS \(University of Chicago, Chicago IL\); Anthony Robbins, MD, PhD \(American Cancer Society\)](#)

#0225 At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer, Last
Updated: Aug 14, 2020

The current Measure workgroup includes:

Charles Cheng MD, FACS (Fox Valley Surgical Associates, Appleton, WI), Daniel McKellar, MD, FACS (Wayne Healthcare, Greenville, OH), David Jason Bentrem, MD (Northwestern Memorial Hospital, Chicago, IL), Karl Bilimoria, MD, FACS (Northwestern Univ/Feinberg Sch of Med, Chicago, IL), Lawrence Shulman MD (University of Pennsylvania, Philadelphia, PA), Matthew A Facktor, MD FACS (Geisinger Medical Center, Danville, PA), Ted James (University of Vermont, Burlington, VT)

This panel meets at least once a calendar year to review quality measures currently supported and implemented by the ACoS Commission on Cancer and to investigate and consider/review development of possible new measures.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2007

Ad.3 Month and Year of most recent revision: 01, 2019

Ad.4 What is your frequency for review/update of this measure? Annual

Ad.5 When is the next scheduled review/update for this measure? 01, 2020

Ad.6 Copyright statement:

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: