NATIONAL QUALITY FORUM

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 #: 3592e
Corresponding Measures:
De.2. **Measure Title:** Global Malnutrition Composite Score
Co.1.1. **Measure Steward:** Academy of Nutrition and Dietetics
De.3. **Brief Description of Measure:** This composite measure of optimal malnutrition care focuses on adults 65 years and older admitted to inpatient service who received care appropriate to their level of malnutrition risk and/or malnutrition diagnosis if properly identified. Best practices for malnutrition care recommend adult inpatients to be screened for malnutrition risk, assessed to confirm findings of malnutrition if found at-risk, and have the proper severity of malnutrition indicated along with a corresponding nutrition care plan that addresses the respective severity of malnutrition.

The malnutrition composite measure includes four component measures which are first scored separately. The overall composite score is derived from averaging the individual performance scores.
1. Screening for malnutrition risk at admission.
2. Completing a nutrition assessment for patients who screened for risk of malnutrition.
3. Appropriate documentation of malnutrition diagnosis in the patient's medical record if indicated by the assessment findings.
4. Development of a nutrition care plan for malnourished patients including the recommended treatment plan.

These four measures represent the key processes of care and generated markers of malnutrition associated with the risk identification, diagnosis, and treatment of malnutrition in older hospitalized adults as supported by clinical guidelines.
1b.1. **Developer Rationale:** The components of this composite measure are supported by clinical guidance that recommends the following: (1) malnutrition screening for patients admitted into the acute inpatient care setting; (2) nutrition assessment for patients at-risk of malnutrition in order to form the basis for an appropriate nutrition intervention; (3) appropriate recognition, diagnosis, and documentation of the nutrition status of a patient in order to address their condition with an appropriate plan of care and communicate patient needs to other care providers .

Implementation of this measure has supported hospitals in the timeliness of the malnutrition risk screening process, the hand off of patients at-risk of malnutrition to Registered Dietitian Nutritionists (RDNs) in the hospital for appropriate nutritional assessment and development of nutrition care plans with recommended nutrition interventions, and the subsequent medical diagnosis and execution of the nutrition care plan with support from the patient's physician. Evidence demonstrates that implementing a standardized protocol for screening, assessment, diagnosis and care planning results in better identification of malnourished patients and subsequent improvements in rates of nutrition intervention for the malnourished. Our outcomes modeling and those reported in other studies also demonstrates the benefits to patient outcomes, specifically reduced risk of 30-day readmissions.

S.4. **Numerator Statement:** The Global Malnutrition Composite Score is comprised of four component measures which are scored separately and who's population is sourced from the overall composite measure denominator.

1. Screening for malnutrition risk at admission
2. Completion of a nutrition assessment for patients who screened for risk of malnutrition
3. Appropriate documentation of malnutrition diagnosis for patients identified with malnutrition
4. Development of a nutrition care plan for malnourished

S.6. **Denominator Statement:** The measure population from which the composite's component measures are sourced from are patients age 65 years and older who are admitted to an acute inpatient hospital.

S.8. **Denominator Exclusions:** All Four Component Measures: patients with a length of stay less than 24 hours
Component Measure #1 only: admission to screening time interval greater than 48 hours
Component Measure #3 and #4 only : Discharge status of hospice or left against medical advice

De.1. **Measure Type:** Composite
S.17. **Data Source:** Electronic Health Records
S.20. **Level of Analysis:** Facility

IF Endorsement Maintenance – Original Endorsement Date: Most Recent Endorsement Date:

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?**

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
Global_Malnutrition_Composite_Score_Evidence_Attachment.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.
The components of this composite measure are supported by clinical guidance that recommends the following: (1) malnutrition screening for patients admitted into the acute inpatient care setting; (2) nutrition assessment for patients at-risk of malnutrition in order to form the basis for an appropriate nutrition intervention; (3) appropriate recognition, diagnosis, and documentation of the nutrition status of a patient in order to address their condition with an appropriate plan of care and communicate patient needs to other care providers .

Implementation of this measure has supported hospitals in the timeliness of the malnutrition risk screening process, the hand off of patients at-risk of malnutrition to Registered Dietitian Nutritionists (RDNs) in the hospital for appropriate nutritional assessment and development of nutrition care plans with recommended nutrition interventions, and the subsequent medical diagnosis and execution of the nutrition care plan with support from the patient's physician. Evidence demonstrates that implementing a standardized protocol for screening, assessment, diagnosis and care planning results in better identification of malnourished patients and subsequent improvements in rates of nutrition intervention for the malnourished. Our outcomes modeling and those reported in other studies also demonstrates the benefits to patient outcomes, specifically reduced risk of 30-day readmissions.

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.

A total of 179,336 patients age 65 years and older were included in the testing population across 56 acute care hospitals in 10 states collected in calendar year 2019. Age-wise, the average age was 76.5 and the mean age was 75. In terms of race, the cohort was 77.8% White, 9.68% Black, 1.59% Asian or Pacific Islander, and 9.56% Other. The sample also included 4.91% who were identified as Hispanic.

Table: Summary Statistics

Median	3.32
Mean	3.07
St. Dev.	0.625653
Minimum	1.18
Maximum	3.77
Q1	2.674284
Q3	3.571668
IQR	0.897384

Table: Component Measure Scores and Overall Composite Scores from Reported Data (N=56)

Site	Component Measure #1 Score	Component Measure #2 Score	Component Measure #3 Score	Component Measure #4 Score	Overall Component Measure Score (0-4)
1	74%	96%	77%	79%	3.27
2	76%	71%	52%	89%	2.88
3	90%	44%	55%	47%	2.35
4	83%	53%	0%	44%	1.80
5	65%	66%	13%	85%	2.29
6	69%	63%	32%	68%	2.33
7	64%	57%	100%	50%	2.71
8	69%	79%	48%	54%	2.50
9	67%	46%	33%	67%	2.13
10	84%	79%	52%	62%	2.78
11	81%	56%	51%	69%	2.58
12	82%	54%	67%	89%	2.92
13	74%	24%	0%	33%	1.31
14	76%	73%	50%	70%	2.69
15	73%	44%	0%	0%	1.18
16	85%	12%	100%	60%	2.57
17	90%	68%	64%	52%	2.74
18	89%	90%	69%	83%	3.31
19	97%	91%	67%	88%	3.43
20	93%	98%	79%	88%	3.58
21	97%	93%	70%	89%	3.48
22	90%	91%	73%	89%	3.43
23	94%	95%	61%	88%	3.38
24	95%	85%	75%	80%	3.36
25	94%	94%	69%	80%	3.38
26	92%	96%	71%	83%	3.42
27	94%	89%	79%	80%	3.42
28	89%	93%	63%	88%	3.33
29	76%	66%	74%	59%	2.75
30	94%	96%	88%	87%	3.65
31	94%	100%	75%	99%	3.67
32	98%	100%	75%	99%	3.72
33	95%	95%	74%	97%	3.62
34	70%	68%	68%	93%	3.00
35	96%	58%	85%	25%	2.64
36	92%	94%	82%	99%	3.66

37	96%	100%	75%	100%	3.71
38	88%	97%	84%	96%	3.64
39	92%	97%	90%	98%	3.77
40	89%	100%	92%	86%	3.67
41	89%	100%	89%	97%	3.75
42	87%	93%	71%	97%	3.47
43	94%	97%	72%	93%	3.56
44	99%	94%	83%	89%	3.66
45	87%	86%	87%	94%	3.54
46	88%	98%	94%	97%	3.77
47	92%	92%	83%	88%	3.55
48	88%	95%	85%	93%	3.60
49	90%	100%	70%	90%	3.50
50	77%	86%	74%	30%	2.67
51	77%	86%	70%	47%	2.79
52	89%	70%	16%	29%	2.03
53	78%	81%	72%	30%	2.61
54	78%	71%	55%	71%	2.75
55	80%	100%	67%	83%	3.30
56	83%	92%	71%	72%	3.18

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.**

An article (citation below), presents our findings of a national malnutrition quality improvement initiative (MQii) where 27 hospitals implemented quality improvement projects aligned with four malnutrition electronic clinical quality measures (eCQMs) that form the basis of this composite measure. The study demonstrated process improvements upon completion of 4 month quality improvement projects focused on: malnutrition screening timeliness, nutrition assessment completeness and timeliness, improvements in appropriate diagnosis of malnutrition. The study reported aggregate improvements across all four measures, with statistically significant improvements in nutrition assessment and malnutrition diagnosis. Furthermore, an outcome model was built to understand the relationship between development of a care plan for malnourished patients and risk of 30-day readmissions. This analysis resulted in a strong association between the nutrition care plan for malnourished patients with a relative risk reduction of 30-day readmissions. Patients (65+) with a malnutrition diagnosis and nutrition care plan had a 24% lower likelihood of 30-day hospital readmissions (21.4% vs. 26.5%, respectively) compared to those without a care plan (OR=0.74, 99%, CI=0.558-0.941).

Valladares AF, Kilgore KM, Partridge J, Sulo S, Kerr KW, McCauley S. How a Malnutrition Quality Improvement Initiative furthers malnutrition measurement and care: results from a hospital learning collaborative. JPEN J Parenter Enteral Nutr. 2020.

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.*

See attached submission form appendix where presented as table under Importance section, Table: Malnutrition and Malnutrition Risk Outcomes By Age, Race/Ethnicity and Gender Strata.

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**

N/A

1c. Composite Quality Construct and Rationale

1c.1. **A composite performance measure is a combination of two or more component measures, each of which individually**

reflects quality of care, into a single performance measure with a single score.

For purposes of NQF measure submission, evaluation, and endorsement, the following will be considered composites:

- Measures with two or more individual performance measure scores combined into one score for an accountable entity.
- Measures with two or more individual component measures assessed separately for each patient and then aggregated into one score for an accountable entity:
  - all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient);

1c.1. Please identify the composite measure construction: two or more individual performance measure scores combined into one score

1c.2. **Describe the quality construct, including:**

- the overall area of quality
- included component measures and
- the relationship of the component measures to the overall composite and to each other.

This composite measure of optimal malnutrition care focuses on adults 65 years and older admitted to inpatient service who received care appropriate to their level of malnutrition risk and/or malnutrition diagnosis if properly identified. Best practices for malnutrition care recommend adult inpatients to be screened for malnutrition risk, assessed to confirm findings of malnutrition if found at-risk, and have the proper severity of malnutrition indicated along with a corresponding nutrition care plan that addresses the respective severity of malnutrition.

This malnutrition composite measure includes four component measures which are first scored separately. The overall composite score is derived from averaging the individual performance scores.

1. Screening for malnutrition risk at admission.
2. Completing a nutrition assessment for patients who screened for risk of malnutrition.
3. Appropriate documentation of malnutrition diagnosis in the patient's medical record if indicated by the assessment findings.
4. Development of a nutrition care plan for malnourished patients including the recommended treatment plan.

These four measures represent the key processes of care and generated markers of malnutrition associated with the risk identification, diagnosis, and treatment of malnutrition in older hospitalized adults as supported by clinical guidelines.

1c.3. **Describe the rationale for constructing a composite measure, including how the composite provides a distinctive or additive value over the component measures individually.**

The process for risk identification, diagnosis, and treatment of malnutrition necessitates a multi-disciplinary care team that begins with identification of an initial risk population for more thorough physical assessment by registered dietitians (RDN). The RDN in turn provides the necessary treatment recommendations to address nutritional status and the clinical indicators that inform a medical diagnosis of malnutrition completed by a physician. The four component measures individually only provide a fraction of the necessary information on quality of care for patients at-risk of malnutrition. For example, knowing which patients have been assessed out of those who were initially identified as at-risk, but not knowing if the appropriate proportion of patients were screened upon admission would be an insufficient assessment of quality of care.

1c.4. **Describe how the aggregation and weighting of the component measures are consistent with the stated quality construct and rationale.**

As studied in the empirical validity testing outlined in the testing attachment, each of the main components of this measure are strongly correlated with outcomes that have been empirically associated with malnutrition including 30-day readmissions and hospital length of stay. In this validity testing, we identified that each measure was correlated in a significant way to both malnutrition as a clinical outcome as well as the sequelae of untreated malnutrition including readmissions and longer length of stay. Therefore, the measure is constructed as an arithmetic average of the four components weighed equally. This is further supported by how the nutrition care process works in practice. Patient who are diagnosed and treated by a care team are most often first identified via a nutrition screening for malnutrition risk completed by a nurse around the time of admission prior to being referred to a registered dietitian for assessment and recommendations for malnutrition diagnosis and nutrition intervention.

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):*

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

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

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.)*
https://www.eatrightpro.org/practice/quality-management/quality-improvement/malnutrition-quality-improvement-initiative

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 an eMeasure **Attachment:** MalnutritionCompositeScore_v5_91_Artifacts_-3-.zip,Global_Malnutrition_Composite_Measure_Feasibility_Scorecard.xlsx

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:** Malnutrition_Composite_Data_Dictionary-637317308342961917.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.
No

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.

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).
The Global Malnutrition Composite Score is comprised of four component measures which are scored separately and who's population is sourced from the overall composite measure denominator.

1. Screening for malnutrition risk at admission

2. Completion of a nutrition assessment for patients who screened for risk of malnutrition
3. Appropriate documentation of malnutrition diagnosis for patients identified with malnutrition
4. Development of a nutrition care plan for malnourished

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).
The composite measure is calculated by summing and then averaging the performance scores for each of the four component measures included in the overall composite measure. Each component measure is a proportion measure. CQL-specifications for all data elements used to calculate each component measure are attached to this form.

Component Measure Numerators are listed below:

Component Measure 1 - Screening for Malnutrition Risk at Admission
Numerator - All patients in the measure population who are documented as at-risk for malnutrition via the completed malnutrition screening

Component Measure 2 - Completion of a Nutrition Assessment for Patients who Screened for Risk of Malnutrition
Numerator - Patients at-risk of malnutrition who have a completed nutrition assessment documented

Component Measure 3 - Appropriate Documentation of Malnutrition Diagnosis for Patients Identified with Malnutrition
Numerator - Patients who have been identified as moderately or severely malnourished by the nutrition assessment who also have a documented medical diagnosis of malnutrition in their medical record

Component Measure 4 - Development of a Nutrition Care Plan for Malnourished Patients
Numerator - Patients with a documented medical diagnosis of malnutrition in their medical record who have a documented nutrition care plan with treatment recommendations to address malnutrition

S.6. **Denominator Statement** *(Brief, narrative description of the target population being measured)*
The measure population from which the composite's component measures are sourced from are patients age 65 years and older who are admitted to an acute inpatient hospital.

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).
Component Measure Denominators are Listed Below:

Component Measure 1 - Screening for Malnutrition Risk at Admission
Denominator - All patients in the measure population with a documented malnutrition screening no more than 48 hours prior to admission to the hospital

Component Measure 2 - Completion of a Nutrition Assessment for Patients who Screened for Risk of Malnutrition
Denominator - Patients from the measure population who are documented as at-risk for malnutrition via the completed malnutrition screening

Component Measure 3 - Appropriate Documentation of Malnutrition Diagnosis for Patients Identified with Malnutrition
Denominator - Patients from the measure population who have a completed nutrition assessment documented with findings of moderate or severe malnutrition

Component Measure 4 - Development of a Nutrition Care Plan for Malnourished Patients
Denominator - Patients from the measure population who have a documented medical diagnosis of malnutrition in their medical record

S.8. **Denominator Exclusions** *(Brief narrative description of exclusions from the target population)*
All Four Component Measures: patients with a length of stay less than 24 hours
Component Measure #1 only: admission to screening time interval greater than 48 hours
Component Measure #3 and #4 only : Discharge status of hospice or left against medical advice

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.)*

- Patient Length of Stay <24 hours: all patients with a calculated length of stay
- Discharge Status – Hospice
- Discharge Status – Left Against Medical Advice
- Admission to Screening Time Interval =48 hours

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

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:**
Continuous variable, e.g. average
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.)*
As studied in the empirical validity testing outlined in the testing attachment, each of the main components of this measure are strongly correlated with outcomes that have been empirically associated with malnutrition including 30-day readmissions and hospital length of stay. In this validity testing, we identified that each measure was correlated in a significant way to both malnutrition as a clinical outcome as well as the sequelae of untreated malnutrition including readmissions and longer length of stay. Therefore, the measure is constructed as an arithmetic average of the four components weighed equally. This is further supported by how the nutrition care process works in practice. Patient who are diagnosed and treated by a care team are most often first identified via a nutrition screening for malnutrition risk completed by a nurse around the time of admission prior to being referred to a registered dietitian for assessment and recommendations for malnutrition diagnosis and nutrition intervention.

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.
To meet minimum requirements for measure implementation in quality reporting programs, there must be a minimum of 20 eligible encounters per reporting entity for valid performance measure scoring.

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.
Electronic Health Records

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.
N/A

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.)*
See CQL Specifications for measure calculation procedures.

2. Validity – See attached Measure Testing Submission Form
Global_Malnutrition_Composite_Measure_Testing_Attachment_Final-637333639882378644.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.
No

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.

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.**
Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score)
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 health records (EHRs)

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: Global_Malnutrition_Composite_Measure_Feasibility_Scorecard-637411453876645777.xlsx

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.

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)*.

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)
Public Reporting Public Health/Disease Surveillance Payment Program Regulatory and Accreditation Programs Professional Certification or Recognition Program Quality Improvement (Internal to the specific organization)	Quality Improvement (external benchmarking to organizations) Malnutrition Quality Improvement Initiative http://malnutritionquality.org

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

Name of Program: Malnutrition Quality Improvement Initiative (Avalere Health and The Academy of Nutrition and Dietetics)

Purpose: The Malnutrition Quality Improvement Initiative (MQii) is designed to help healthcare provider organizations improve malnutrition care and subsequently achieve better outcomes. The primary goal is to advance evidence-based, high-quality, patient-driven care for hospitalized older adults who are malnourished or at-risk for malnutrition by offering a combination of tools and resources to support quality improvement.

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?*)
Performance data so far are only reported as performance feedback and benchmarking information to participants of the MQii.

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.*)
The current composite measure is under consideration for the Hospital Inpatient Quality Reporting Program by the Centers for Medicare and Medicaid Services, it is anticipated that this measure will have been reviewed for appropriateness and adequacy prior to being reviewed by this committee. It was first submitted for consideration for the 2020-2021 measures under consideration review cycle, June 2020.

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.
The Malnutrition Quality Improvement Initiative currently represents 105 individual hospitals (academic medical centers, short term acute care centers, community hospitals, critical access hospitals) that have individually reported on the component measures of this composite measure. They receive recurring individual performance feedback reports with their individual performance scores and on a bi-annual basis receive benchmarking data to understand their performance relative to other facilities which reported in the same period. Additionally, reporting sites receive feedback on their overall composite score, hospital readmissions and length of stay data to track and monitor their progress as they continue to implement quality improvement efforts.

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.**
In addition to what has been described in 4a2.1.1, the MQii program offers monthly educational webinars and technical support group calls to address questions about feedback on the performance reports. These provide opportunities to educate the participating clinical teams on efforts being taken by their colleagues to close quality gaps in malnutrition care. Hospitals are able to see how their performance benchmarked across similar hospital type and size, as well as compared to the mean performance for each reporting period (calculated twice a year for the previous 3 months of performance data).

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.
Participants in the MQii participate in recurring group technical calls and feedback sessions sharing their best practices, lessons learned and troubleshooting their quality improvement efforts with each other. These experiences are captured and sometimes are reported for submission to peer-reviewed journals for publication (see 4a2.2.2). Surveys are also periodically conducted to assess areas of focus and experience with measure implementation with program participants.

4a2.2.2. **Summarize the feedback obtained from those being measured.**
Several organizations have used the performance feedback to better inform their quality improvement initiatives. Many have gone on to publish their findings in peer-reviewed literature:

Wills J. Prioritizing Malnutrition Care Through Discrete eCQM Data Tracking in the Electronic Health Record for an Academic Medical Center. J Acad Nutr Diet. 2019;119(9 Suppl 2):S63.

Danis K, Kline M, Munson M, et al. Identifying and managing malnourished hospitalized patients utilizing the malnutrition quality improvement initiative: the upmc experience. J Acad Nutr Diet. 2019;119(9 Suppl 2):S40-S43.

Goldman A, Siegel S, & Partridge J. Improving Patient Outcomes & Decreasing Hospital Costs Through Nutrition. 2019;119(9 Suppl 2):S70.

Pratt KJ, Hernandez B, Blancato R, Blankenship J, Mitchell K. Impact of an interdisciplinary malnutrition quality improvement project at a large metropolitan hospital. BMJ Open Qual. 2020;9(1).

Nepple KG, Tobert CM, Valladares AF, Mitchell K, Yadrick M. Enhancing identification and management of hospitalized patients who are malnourished: a pilot evaluation of electronic quality improvement measures. J Acad Nutr Diet. 2019;119(9 Suppl 2):S32-S39.

Others have presented at academic conferences:

March 2019. Wills-Gallagher J, Valladares AF, Hemingway S & Spotts M. “Improving Appropriate Identification and Diagnosis of Malnutrition for Hospitalized Patients” – Abstract and oral presentation at the American Society for Parenteral and Enteral Nutrition (ASPEN) Annual Research & Practice Conference. Phoenix, AZ.

May 2017. Fitall E, Bruno M, Jones K, Lynch J, Silver H, Godamunne K, Valladares A, Mitchell K. Malnutrition Care: “Low Hanging Fruit” for Hospitalist Clinical Performance Improvement. Hospital Medicine. Las Vegas, NV

4a2.2.3. **Summarize the feedback obtained from other users**
N/A

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.**
The main area of feedback that has been instrumental is on the use of the care plan measure which historically had a numerator tied to another step in the RDN´s role of the process. However, we identified after years of feedback that the true gap in care was that of patients not having their nutrition care plans advanced by the physicians despite their being an assessment result indicative of malnutrition. Therefore, when designing the global malnutrition composite score, the care plan measure was updated to reflect need to have a care plan for all patients with a diagnosis of malnutrition documented and agreed to by the caring physician team.

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.
Most recent published data (available in Valladares et al, 2020) demonstrate improvement across all major component measures for the Global Malnutrition Composite Score. As new hospitals join the Collaborative, the project team has divided the strata into longer-term or "veteran" participants vs. new participants who are newly becoming acquainted with measure implementation. This division of new and more experienced participants has demonstrated that the same effects witnessed by the more experienced hospitals (improved identification, risk reduction and referral to treatment) is seen in those new sites. The more veteran sites are seeing the improvements spill over into new areas of focus including discharge planning and coordination of nutrition care when transitioning out of the hospital.

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.**
N/A

4b2.2. **Please explain any unexpected benefits from implementation of this measure.**
N/A

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.**

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.)

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:** Appendix_Doc_NQF_Endorsement_Submission_Importance.docx

Contact Information

Co.1 **Measure Steward (Intellectual Property Owner):** Academy of Nutrition and Dietetics
Co.2 **Point of Contact:** Sharon, McCauley, smccauley@eatright.org
Co.3 **Measure Developer if different from Measure Steward:** Avalere Health
Co.4 **Point of Contact:** Angel, Valladares, avalladares@avalere.com, 202-446-2242-

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.

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.2 **Year the measure was first released:**
Ad.3 **Month and Year of most recent revision:**
Ad.4 **What is your frequency for review/update of this measure?**
Ad.5 **When is the next scheduled review/update for this measure?**

Ad.6 **Copyright statement:** © Academy of Nutrition and Dietetics
Ad.7 **Disclaimers:**

Ad.8 **Additional Information/Comments:**