Global Malnutrition Composite Score Specification Manual

June 2022

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Background

Burden of Malnutrition in Hospitalized Adults

Malnutrition is a leading cause of morbidity and mortality, especially among older adults. Evidence suggests that 20% to 50% of all patients are malnourished or at risk at the time of hospital admission[1] and up to 31% of these malnourished patients and 38% of well-nourished patients experience nutritional decline during their hospital stays.[2] In addition, as many as 39% of older adult patients age 65 and older admitted to the hospital may be malnourished or at risk.[3]

Malnutrition refers to an imbalance of nutrients (either deficiency or excess) over time, and may contribute to chronic illness, acute disease, and/or and infection. People can be underweight or overweight while malnourished when they lack sufficient nutrients needed to promote healing and rehabilitation and to reduce the risk of medical complications. Malnutrition and weight loss can also contribute to sarcopenia (the age associated loss of skeletal muscle mass and function), which can impact recovery, mobility, and independence.

Hospitalized patients are vulnerable to nutritional decline for many reasons, including dietary restrictions because of tests, treatments, and medical conditions, as well as poor appetite, gastrointestinal problems, and other reasons. One study noted that one-fifth of hospitalized patients age 65+ had an average nutrient intake of less than 50% of their calculated maintenance energy requirements. Patients who are malnourished while in the hospital have a greater risk of complications and readmissions and longer length of stay, which is associated with up to a 300% increase in costs of care.[4] Nutritional status is also considered an important factor in "post-hospital syndrome," which can result from the stress of hospitalization.[5]

Gaps in Malnutrition Care Quality

Despite the evidence that demonstrates the benefits of nutrition for healing and recovery and a clinical consensus model for implementing optimal nutrition care, significant variation in practice and gaps in care related to nutrition screening, assessment, intervention, monitoring, and overall care for malnourished and at-risk hospitalized older adults remain.

Nutrition screening is the first step in optimal malnutrition care and it triggers a nutrition assessment for patients found to be at risk. The nutrition assessment is the basis upon which diagnosis, care plans, and treatments for malnourished patients are made.[6] Research demonstrates that there is significant room to improve identification, diagnosis, and treatment of malnutrition in hospitalized patients.

Current estimates of the prevalence of adult malnutrition range from 15%−60%, depending on the patient population and criteria used to identify its occurrence.[7] However, a review of nationally representative data on cost and utilization indicated that, in 2018, only 8.9% of patients had a diagnosis of malnutrition,[8] suggesting that malnutrition may be severely under-recognized and underdiagnosed in the hospital setting. This may be due to clinical practice gaps in numerous aspects of nutrition care.

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[2] Braunschweig C et al. *J Am Diet Assoc* 2000; 100 (11): 1316-1322.

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[8] Guenter P, Abdelhadi R, Anthony P, Blackmer A, Malone A, Mirtallo JM, Phillips W, Resnick HE. Malnutrition diagnoses and associated outcomes in hospitalized patients: United States, 2018. Nutr Clin Pract. 2021 ;36(5):957-969..

For instance, a national survey of hospital-based professionals in the United States found that only 36.7% reported completing nutrition screening at admission, 50.8% reported doing so within 24 hours, and 69% reported documenting the findings in the medical record.[9] Consequently, this gap in identification of malnutrition risk impedes the ability of dietitians to complete nutrition assessments and intervene appropriately for the at-risk patient population. In addition, no national benchmarking of malnutrition in acute care hospitals in the United States exists. Such benchmarking would require standardized malnutrition screening and assessment to track and monitor malnutrition rates and the diagnosis rate that follows.[9]

Appropriate identification and assessment of patients at risk for malnutrition by a dietitian—and communication of these results to the physician—are critical to ensure patients receive a malnutrition diagnosis and the necessary follow-up care. A study of 395 patients who screened positively for malnutrition sought to determine if they received appropriate malnutrition care. When a dietitian was consulted, 80.6% of malnourished patients received additional feeding and/or vitamin supplements compared to 13.2% and 27.9%, respectively, by medical doctors.[10] Addressing these performance gaps can facilitate optimal malnutrition care and address the adverse malnutrition-associated outcomes discussed above.

How Malnutrition Intervention Can Help to Improve Health Outcomes and Lower Costs

Addressing malnutrition directly aligns with the "triple aim" of healthcare by reducing costs of care, improving health, and improving care quality. Clinical consensus recommendations underscore that early identification and systematic nutrition care coupled with interdisciplinary collaboration are critical in remediating malnutrition across multiple settings.[11] The engagement of patients and their family in their nutrition care plan during hospitalization and upon discharge is important to facilitate recovery. Studies have demonstrated that implementation of a comprehensive nutrition pathway from inpatient admission through discharge improved identification of high-risk patients and decreased time to nutrition consult, length of hospital stay, and 30-day readmission rate.[12,13] Further evidence demonstrates that use of malnutrition quality measures can help health systems identify gaps in quality of care for malnourished patients[14] and may lead to improved patient outcomes when used as part of comprehensive quality improvement efforts.[15]

The Academy of Nutrition and Dietetics

The Academy of Nutrition and Dietetics (Academy) is committed to advancing the profession through a variety of quality strategy initiatives for credentialed nutrition and dietetics practitioners across practice areas. They include member engagement, development, and utilization of quality improvement tools, resources, and education materials. Most notably, the Academy has supported development and stewardship of de novo nutrition-focused electronic clinical quality measures (eCQMs) that can be used improve patient outcomes, reduce cost burden, and advance the role of registered dietitian nutritionists (RDNs).

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[9] Patel V, Romano M, Corkins MR, et al. Nutrition screening and assessment in hospitalized patients: a survey of current practice in the United States. Nutr Clin Pract. 2014;29(4):483-490.

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[15] 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. 2021;45(2):366-371.

Overview of Global Malnutrition Composite Score

The Global Malnutrition Composite Score (GMCS) electronic clinical quality measure (eCQM) assesses the percentage of hospitalizations for adults age 65 years and older who received optimal inpatient malnutrition care appropriate to their level of malnutrition risk and severity. The GMCS eCQM is constructed as an arithmetic average of four component measures. Table 1 presents a description of the measure's components.

Table 1. Description of GMCS Component Measures

Component Title	Description
Malnutrition Screening	Proportion of inpatient hospitalizations with a screening for malnutrition risk
Nutrition Assessment	Proportion of inpatient hospitalizations among patients identified as at risk for malnutrition with a nutrition assessment
Malnutrition Diagnosis	Proportion of inpatient hospitalizations among patients identified as moderately or severely malnourished upon nutrition assessment with an appropriate diagnosis
Nutrition Care Plan	Proportion of inpatient hospitalizations among patients identified as moderately or severely malnourished upon nutrition assessment with a documented nutrition care plan

Malnutrition Quality Improvement Initiative (MQii)

The GMCS eCQM is one aspect of a broader multi-stakeholder initiative knows as the Malnutrition Quality Improvement Initiative (MQii), which has a mission to advance evidence-based, high-quality, and patient-driven care for hospitalized older adults (age 65 and older) who are malnourished or at risk for malnutrition. The objectives of the initiative are to:

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- Support healthcare institutions in achieving malnutrition standards of care through use of an interdisciplinary, evidence-based malnutrition quality improvement toolkit and a set of malnutrition electronic clinical quality measures.
- Advance adoption of malnutrition best practices at healthcare institutions through a nationwide MQii Learning Collaborative with the goal of improving outcomes that are important to patients and clinicians.
- Improve nutrition risk identification and care as patients transition across care settings--for example, through integration into existing care transition pathways and accountable care models.
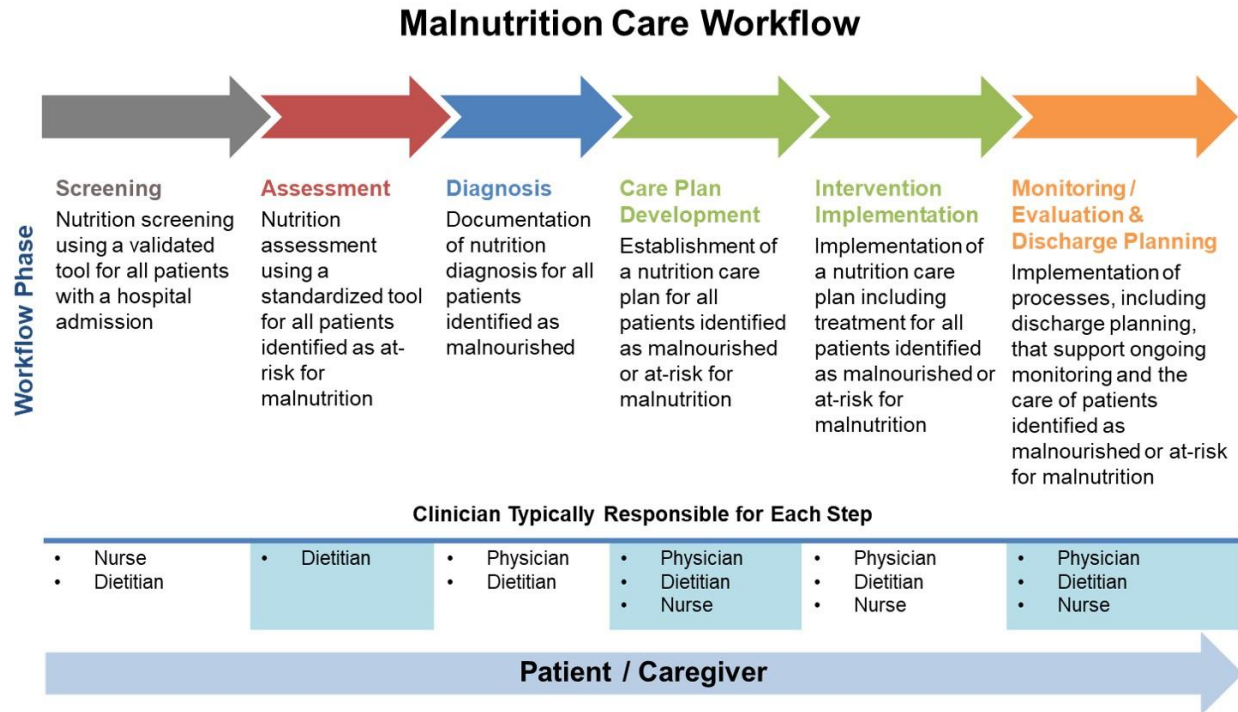
The MQii includes two parallel tracks that serve to advance malnutrition care for the older adult population in the inpatient setting:
- Pilot demonstrations and a learning collaborative of hospitals focused on reducing clinical practice variability in malnutrition care through the implementation of a standardized toolkit
- eCQM development and implementation to advance the measurement of malnutrition care in hospitals

The Malnutrition Care Workflow

The GMCS eCQM is intended to assess hospital performance along an evidence- and consensus-based malnutrition workflow that accounts for patient preferences and risk factors (Figure 1). The four component measures in the GMCS eCQM assess initial stages of the malnutrition care workflow, spanning from screening to the development of a nutrition care plan.

Figure 1. Malnutrition Care Workflow and Alignment of GMCS Measure Components

Malnutrition Care Workflow

Workflow Phase

Screening	Assessment	Diagnosis	Care Plan Development	Intervention Implementation	Monitoring / Evaluation & Discharge Planning
Nutrition screening using a validated tool for all patients with a hospital admission	Nutrition assessment using a standardized tool for all patients identified as at-risk for malnutrition	Documentation of nutrition diagnosis for all patients identified as malnourished	Establishment of a nutrition care plan for all patients identified as malnourished or at-risk for malnutrition	Implementation of a nutrition care plan including treatment for all patients identified as malnourished or at-risk for malnutrition	Implementation of processes, including discharge planning, that support ongoing monitoring and the care of patients identified as malnourished or at-risk for malnutrition

Clinician Typically Responsible for Each Step

• Nurse • Dietitian	• Dietitian	• Physician • Dietitian	• Physician • Dietitian • Nurse	• Physician • Dietitian • Nurse	• Physician • Dietitian • Nurse

Patient / Caregiver

Additional Measure Specification Resources

The GMCS eCQM is fully specified for use in electronic health records (EHRs). The machine-readable specifications are available on the Electronic Clinical Quality Improvement (eCQI) Resource Center.

To support implementation of eCQMs into an EHR, measure users may benefit from using a few resources available on the GMCS measure website:

- *XML-Based Specifications:* an XML document in Health Quality Measure Format (HQMF), which is a standards-based representation of quality measures as electronic documents
- *Human-Readable Specifications:* generated from the XML-based specifications is a human-readable HTML document that allows the XML to be viewed in a web browser
- *Value Set Codes Inventory:* an Excel spreadsheet that contains all value sets included in the GMCS, with additional information containing the value set developer, their identifiers (OIDs), descriptive names, revision date, code system, code system version used, and all of the concepts in each value set as codes with descriptors

Disclaimer and Copyright Information

This measure and the specifications are subject to further revisions.
This performance measure is not a clinical guideline, does not establish a standard of medical care, and has not been tested for all potential applications.
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Component Measure 1: Malnutrition Screening

Description: Proportion of inpatient hospitalizations with a screening for malnutrition risk.

Rationale: Patients who are malnourished while in the hospital have been associated with adverse patient safety outcomes, such as increased risk of complications, readmissions, and length of stay. Patients who experience these increased risks are also associated with a significant increase in costs. Malnutrition is associated with many adverse outcomes, including depression of the immune system, impaired wound healing, muscle wasting, and increased mortality. Referral rates for nutrition assessment and treatment of malnourished patients by dietitians have proven to be suboptimal, thereby increasing the likelihood of patients developing such aforementioned complications (Gomes, 2016, Cereda et al., 2015, Corkins, 2014, Barker et al., 2011, Lim et al., 2012, Amaral et al., 2007, Kruizenga et al., 2005).

Screening for malnutrition risk in healthcare settings is important to enable early and effective interventions for patients who are malnourished or at risk of malnutrition. These screenings are the first step in providing optimal, evidence-based malnutrition care for patients. Although a review of nationally representative data on cost and utilization indicated that in 2018, 8.9% of patients had a diagnosis of malnutrition (Guenter, 2021), this may be a severely underreported figure as other studies have estimated 4—19 million cases are left undiagnosed and untreated. For example, Patel et al. (2014) conducted a national survey of hospital-based professionals in the United States focused on nutrition screening and assessment practices and associated gaps in knowledge of nutrition care. Out of 1,777 unique respondents, only 36.7% reported completing nutrition screening at admission, and 50.8% reported doing so within 24 hours. Only 69% reported documenting the findings in the medical record. Finally, it is important that malnutrition screening tools should be validated to ensure that screening is as accurate and reliable as possible (NICE, 2012).

Type of Measure: Process

Improvement Notation: A higher rate indicates better quality of care.

Initial Population: All inpatient hospitalizations during the measurement period with a length of stay of 24 hours or more among individuals 65 years of age and older at the start of the measurement period.

Denominator: Initial Population.

Excluded Populations: None.

> **Data Elements:**

- Inpatient Admission Time
- Birthdate
- Inpatient Discharge Time

Numerator: Hospitalizations in the denominator with a completed malnutrition screening documented in the medical record. For the purposes of this measure, it is recommended that a malnutrition screening be performed using a validated screening tool, such as one of the following:

- Malnutrition Screening Tool (Wu, 2012)
- Nutrition Risk Classification (Kovacevich, 1997)
- Nutritional Risk Index (Honda, 2016)
- Nutritional Risk Screening 2002 (Bauer, 2005)
- Short Nutrition Assessment Questionnaire (Pilgrim, 2016)

> **Data Elements:**

- Completed Malnutrition Screening

Risk Adjustment: None

Data Collection Approach: This measure is specified for use with electronic health records. It has XML-based specifications which are mapped onto the hospital's EHR data warehouse to extract the necessary data elements for the measure specifications. Data elements should be labeled with nationally standardized coding terminology included in the value sets built into the measure specifications.

Data Accuracy: Variation may exist at the level of documentation of appropriate data for the required data elements. Since the data elements represent the completion of discrete care processes, the accuracy of the data is dependent on the initial documentation by hospital staff.

Measure Analysis Suggestions: None

Sampling: None

Data Reported As: Aggregated rate generated from count data reported as a proportion (numerator/denominator)

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Component Measure 2: Nutrition Assessment

Description: Proportion of inpatient hospitalizations among patients identified as at-risk for malnutrition with a nutrition assessment.

Rationale: Patients who are malnourished while in the hospital have been associated with important adverse patient safety outcomes, such as increased risk of complications, readmissions, and length of stay. Malnutrition is associated with many adverse outcomes, including depression of the immune system, impaired wound healing, muscle wasting, and increased mortality. Referral rates for nutrition assessment and treatment of malnourished patients by dietitians have proven to be suboptimal, thereby increasing the likelihood of developing such complications (Corkins, 2014), (Barker et al., 2011), (Amaral, et al., 2007), (Kruizenga et al. 2005). Although a review of nationally representative data on cost and utilization indicated that in 2018, 8.9% of patients had a diagnosis of malnutrition (Guenter, 2021), this may be a severely underreported figure as other studies have estimated that 4—19 million cases are left undiagnosed and untreated. For example, Patel et al. (2014) conducted a national survey of hospital-based professionals in the United States focused on nutrition screening and assessment practices and associated gaps in knowledge of nutrition care. Out of 1,777 unique respondents, only 23.1% reported using a validated assessment tool to help identify clinical characteristics for a malnutrition diagnosis. Nutrition assessments conducted for at-risk patients identified by malnutrition screening using a validated screening tool was associated with key patient outcomes including less weight loss, reduced length of stay, improved muscle function, better nutritional intake, and fewer readmissions (Mueller, 2011).

The use of validated nutrition assessments are important tools for the identification of physical findings that help clinicians determine the appropriate nutrition interventions and care plans that properly address impaired nutrition status. The identification of these malnutrition findings is independently associated with adverse patient outcomes. In a study of 409 patients with a median age of 68, researchers were able to demonstrate that declining nutritional status as assessed by the subjective global assessment , a validated assessment tool, was significantly associated with prolonged length of stay (Allard, 2016). Additionally, a study of 733 from more than a dozen hospitals identified that the completion of a validated assessment for patients who were hospitalized was able to detect predictors of outcomes for malnutrition, such as length of stay and readmission within 30 days after discharge (Jeejeebhoy, 2015).

Type of Measure: Process

Improvement Notation: A higher rate indicates better quality of care.

Initial Population: All inpatient hospitalizations during the measurement period with a length of stay of 24 hours or more among individuals 65 years of age and older at the start of the measurement period.

Denominator: Initial population with malnutrition screening result of at-risk.

Excluded Populations: None.

Data Elements:

- Inpatient Admission Time
- Birthdate
- Inpatient Discharge Time
- Completed Malnutrition Screening
- Malnutrition Screening Result

Numerator: Hospitalizations in the denominator for which a nutrition assessment Is documented in the medical record. Recommended nutrition assessment tools include:

- Subjective Global Assessment (Detsky, 1987)
- Patient Generated Subjective Global Assessment (Bauer, 2002)

- Nutrition-Focused Physical Exam (White, 2012)

Data Elements:

- Completed Nutrition Assessment

Risk Adjustment: None

Data Collection Approach: This measure is specified for use with electronic health records. It has XML-based specifications which are mapped onto the hospital's EHR data warehouse to extract the necessary data elements for the measure specifications. Data elements should be labeled with nationally standardized coding terminology included in the value sets built into the measure specifications.

Data Accuracy: Variation may exist at the level of documentation of appropriate data for the required data elements. Since the data elements represent the completion of discrete care processes, the accuracy of the data is dependent on the initial documentation by hospital staff.

Measure Analysis Suggestions: None

Sampling: None

Data Reported As: Aggregated rate generated from count data reported as a proportion (numerator/denominator)

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Patel V, Romano M, Corkins MR, et al. Nutrition screening and assessment in hospitalized patients: a survey of current practice in the United States. Nutr Clin Pract. 2014;29(4):483-490.

Volkert D, Saeglitz C, Gueldenzoph H, Sieber CC, Stehle P. Undiagnosed malnutrition and nutrition-related problems in geriatric patients. J Nutr Health Aging. 2010;14(5):387-92.

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Component Measure 3: Malnutrition Diagnosis

Description: Proportion of inpatient hospitalizations among patients identified as moderately or severely malnourished upon nutrition assessment with an appropriate diagnosis.

Rationale: Data analyzed from the Healthcare Cost and Utilization Project (HCUP), a nationally representative data set describing U.S. hospital discharges, indicated that approximately 8.9% of hospital discharges included malnutrition as a diagnosis in 2018 (Guenter, 2021). However, past studies have used validated screening tools to indicate a substantially higher prevalence of malnutrition that has gone undiagnosed in the hospital ranging from 33% (Robinson, 2003) to 78% (Lew, 2017, Somanchi, 2011). Patients who are malnourished while in the hospital have been associated with important negative outcomes such as increased risk of complications, readmissions, and length of stay. Malnutrition is also associated with many adverse outcomes, including depression of the immune system, impaired wound healing, muscle wasting, and increased mortality. Referral rates fornutrition assessment and treatment of malnourished patients by dietitians have proven to be suboptimal, thereby increasing the likelihood of developing such complications (Corkins, 2014, Barker et al., 2011, Amaral, et al., 2007, Kruizenga et al., 2005).

Nutritional status and progress are often not adequately documented in the medical record. It can be difficult to tell when (or if) patients are consuming adequate and appropriate food and supplements. In addition, nutritional procedures and EHR-triggered care are often lacking in the hospital (Corkins, 2014). Current evidence supports the early and rapid identification of malnutrition status in order to allow for timely treatment of malnutrition in the hospital. Part of the recommended process for implementing nutrition care is appropriate recognition of the nutrition status, diagnosis, and documentation of that status and diagnosis to address a patient's condition with an appropriate plan of care and communicate patient needs to other care providers. Identifying and addressing malnutrition early in the episode of care is associated with reduced lengths of stay, 30-day readmission rates, hospital-acquired conditions, and overall healthcare costs (Lew, 2017, Meehan, 2016, Fry, 2010).

A randomized controlled trial of 652 hospitalized, malnourished older adults aged 65 years and older evaluated the use of a high-protein oral nutritional supplements for its impact on patient outcomes. The study reported a significant reduction of 90-day mortality (p = 0.018) (Deutz, 2016). Additionally, a nutrition support intervention in patients identified by screening and assessment as at risk for malnutrition or malnourished may improve clinical outcomes (Mueller, 2011). Several research studies associated early nutritional care after risk identification with improved outcomes such as reduced length of stay, reduced risk of readmissions, and lower cost of care (Deutz, 2016, Lew, 2017, Meehan, 2016, Milne, 2009, Kruizenga, 2005).

Type of Measure: Process

Improvement Notation: A higher rate indicates better quality of care.

Initial Population: All inpatient hospitalizations during the measurement period with a length of stay of 24 hours or more among individuals 65 years of age and older at the start of the measurement period.

Denominator: Initial population with nutrition assessment results of severely or moderately malnourished.

Excluded Populations: None.

   Data Elements:

   - Inpatient Admission Time
   - Birthdate
   - Inpatient Discharge Time
   - Completed Nutrition Assessment

- Nutrition Assessment Result

Numerator: Hospitalizations in the denominator with a documented diagnosis of malnutrition.

Data Elements:

- Malnutrition Diagnosis

Risk Adjustment: None

Data Collection Approach: This measure is specified for use with electronic health records. It has XML-based specifications which are mapped onto the hospital's EHR data warehouse to extract the necessary data elements for the measure specifications. Data elements should be labeled with nationally standardized coding terminology included in the value sets built into the measure specifications.

Data Accuracy: Variation may exist at the level of documentation of appropriate data for the required data elements. Since the data elements represent the completion of discrete care processes, the accuracy of the data is dependent on the initial documentation by hospital staff.

Measure Analysis Suggestions: None

Sampling: None

Data Reported As: Aggregated rate generated from count data reported as a proportion (numerator/denominator)

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Component Measure 4: Nutrition Care Plan

Description: Proportion of inpatient hospitalizations among patients identified as moderately or severely malnourished upon nutrition assessment with a documented nutrition care plan.

Rationale Patients who are malnourished while in the hospital have been associated with an increased occurrence of certain adverse patient outcomes such as increased risk of complications, readmissions, and prolonged length of stay. Malnutrition is also associated with other adverse occurrences including depression of the immune system, impaired wound healing, muscle wasting, and increased mortality. Referral rates for nutrition assessment and treatment of malnourished patients by dietitians have proven to be suboptimal, thereby increasing the likelihood of developing such aforementioned complications (Corkins, 2014, Barker et al., 2011, Amaral, et al., 2007, Kruizenga et al., 2005). Nutritional status and progress are often not adequately documented in the medical record. It can be difficult to tell when (or if) patients are consuming adequate and appropriate food and supplements. In addition, nutritional procedures and EHR-driven care recommendations are often lacking in the hospital. Similarly, nutritional care plans and patient issues are poorly communicated to post-acute facilities and primary care providers (Corkins, 2014). Current evidence supports the early and rapid identification of malnutrition in order to allow for timely treatment of malnutrition in the hospital. Part of the recommended process for implementing nutrition care is 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. Identifying and addressing malnutrition early in the episode of care is associated with reduced lengths of stay, 30-day readmission rates, hospital-acquired conditions, and overall healthcare costs (Lew, 2017, Meehan, 2016, Fry, 2010).

A randomized controlled trial of 652 hospitalized, malnourished older adults aged 65 years and older evaluated the use of a high-protein oral nutritional supplements for its impact on patient outcomes. The study reported a significant reduction of 90-day mortality (p = 0.018) (Deutz, 2016). Additionally, a nutrition support intervention in patients identified by screening and assessment as at risk for malnutrition or malnourished may improve clinical outcomes (Mueller, 2011). Several research studies associated early nutritional care after risk identification with improved outcomes such as reduced length of stay, reduced risk of readmissions, and lower cost of care (Lew, 2017, Deutz, 2016, Meehan, 2016, Milne, 2009, Kruizenga, 2005).

Type of Measure: Process

Improvement Notation: A higher rate indicates better quality of care.

Initial Population: All inpatient hospitalizations during the measurement period with a length of stay of 24 hours or more among individuals 65 years of age and older at the start of the measurement period.

Denominator: Initial population with nutrition assessment results of severely or moderately malnourished.

Excluded Populations: None.

   Data Elements:

- Inpatient Admission Time
- Birthdate
- Inpatient Discharge Time
- Completed Nutrition Assessment
- Nutrition Assessment Result

Numerator: Hospitalizations in the denominator with a nutrition care plan documented in the medical record. Care plan components include but are not limited to: completed assessment results; data and

time stamp; treatment goals; prioritization based on treatment severity; prescribed treatment/intervention; identification of members of the care team, timeline for patient follow-up.

Data Elements:

- Documented Nutrition Care Plan

Risk Adjustment: None

Data Collection Approach: This measure is specified for use with electronic health records. It has XML-based specifications which are mapped onto the hospital's EHR data warehouse to extract the necessary data elements for the measure specifications. Data elements should be labeled with nationally standardized coding terminology included in the value sets built into the measure specifications.

Data Accuracy: Variation may exist at the level of documentation of appropriate data for the required data elements. Since the data elements represent the completion of discrete care processes, the accuracy of the data is dependent on the initial documentation by hospital staff.

Measure Analysis Suggestions: None

Sampling: None

Data Reported As: Aggregated rate generated from count data reported as a proportion (numerator/denominator)

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Value Set

The GMCS eCQM includes 12 value sets containing codes defined using standardized terminologies. A high-level overview is included in Table 2.

Table 2. Overview of GMCS eCQM Value Sets

Value Set Name	Intent	Terminology, Code, Description
Encounter Inpatient	Identify inpatient hospitalization events	SNOMEDCT, 183452005, Emergency hospital admission (procedure) SNOMEDCT, 32485007, Hospital admission (procedure) SNOMEDCT, 8715000, Hospital admission, elective (procedure)
Ethnicity	Identify patient ethnicity according to CDC Race & Ethnicity code system	CDCREC, 2135-2, Hispanic or Latino CDCREC, 2186-5, Not Hispanic or Latino
Malnutrition Assessment	Identify nutrition assessments performed	SNOMEDCT, 310243009, Nutritional assessment (procedure) LOINC, 75282-4, Nutrition assessment panel LOINC, 75285-7, Comparative nutrition assessment standards panel LOINC, 75303-8, Nutrition assessment narrative
Malnutrition Diagnosis	Identify medical malnutrition diagnosis	SNOMEDCT, 190602008, Moderate protein-calorie malnutrition (weight for age 60-74 percent of standard) (disorder) SNOMEDCT, 190606006, Moderate protein energy malnutrition (disorder) SNOMEDCT, 238107002, Deficiency of macronutrients (disorder) SNOMEDCT, 238111008, Deficiency of micronutrients (disorder) SNOMEDCT, 272588001, Malnutrition (calorie) (disorder) SNOMEDCT, 302872003, Disorder of hyperalimentation (disorder) SNOMEDCT, 360549009, Severe protein-calorie malnutrition (Gomez: less than 60 percent of standard weight) (disorder) SNOMEDCT, 441951000124102, Starvation-related malnutrition (disorder) SNOMEDCT, 441961000124100, Acute disease or injury-related malnutrition (disorder) SNOMEDCT, 441971000124107, Chronic disease-related malnutrition (disorder) SNOMEDCT, 65404009, Undernutrition (disorder) SNOMEDCT, 70241007, Nutritional deficiency disorder (disorder) ICD10CM, E43, Unspecified severe protein-calorie malnutrition ICD10CM, E44.0, Moderate protein-calorie malnutrition ICD10CM, E45, Retarded development following protein-calorie malnutrition ICD10CM, E46, Unspecified protein-calorie malnutrition

		ICD10CM, T73.0, Starvation
Malnutrition Risk Screening	Identify malnutrition screenings performed	SNOMEDCT, 171184005, Malnutrition screening (procedure) SNOMEDCT, 414648004, Malnutrition universal screening tool (assessment scale) SNOMEDCT, 44321609, Assessment using malnutrition universal screening tool (procedure) ICD10CM, Z13.21, Encounter for screening for nutritional disorder
Malnutrition Screening At Risk Result	Identify malnutrition screening findings of "at-risk"	SNOMEDCT, 129689002, At risk for nutritional problem (finding) SNOMEDCT, 284670008, Nutritionally compromised (finding) SNOMEDCT, 704358009, At risk of nutritional deficit (finding)
Nutrition Care Plan	Identify evidence of nutrition care plan	SNOMEDCT, 182922004, Dietary regime (regime/therapy) SNOMEDCT, 225372007, Total parenteral nutrition (regime/therapy) SNOMEDCT, 229912004, Enteral feeding (regime/therapy) SNOMEDCT, 386373004, Nutrition therapy (regime/therapy) SNOMEDCT, 413315001, Nutrition / feeding management (regime/therapy) SNOMEDCT, 418995006, Feeding regime (regime/therapy) SNOMEDCT, 428461000124101, Referral to nutrition professional (procedure) SNOMEDCT, 435691000124100, Diet modified for specific foods or ingredients (regime/therapy) SNOMEDCT, 441041000124100, Counseling about nutrition (procedure) SNOMEDCT, 448556005, Oral nutritional support (regime/therapy) SNOMEDCT, 61310001, Nutrition education (procedure) SNOMEDCT, 709564003, Restricting oral intake (regime/therapy) CPT, 97802, Medical nutrition therapy; initial assessment and intervention, individual, face-to-face with the patient, each 15 minutes CPT, 97803, Medical nutrition therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes CPT, 97804, Medical nutrition therapy; group (2 or more individual(s)), each 30 minutes
Nutritional Status Moderately Malnourished	Identify nutrition assessment findings of "moderately malnourished"	SNOMEDCT, 190602008, Moderate protein-calorie malnutrition (weight for age 60-74 percent of standard) (disorder) SNOMEDCT, 77091003, Malnutrition of moderate degree (Gomez: 60 percent to less than 75 percent of standard weight) (disorder) ICD10CM, E44.0, Moderate protein-calorie malnutrition

Nutritional Status Severely Malnourished	Identify nutrition assessment findings of "severely malnourished"	SNOMEDCT, 36549009, Severe protein-calorie malnutrition (Gomez: less than 60 percent of standard weight) (disorder) ICD10CM, E43, Unspecified severe protein-calorie malnutrition
ONC Administrative Sex	Identify patient sex at birth according to HL7 V3 vocabulary	AdministrativeGender, Female, NA AdministrativeGender, Male, NA
Payer	Identify patient insurance coverage according to US Public health Data Consortium Source of Payment standards	Examples below. See VSAC value set 2.16.840.1.114222.4.11.3591 for the full list. SOP, 1, MEDICARE SOP, 81, Self-pay (includes applicants for insurance and Medicaid applicants)
Race	Identify patient ethnicity according to CDC Race & Ethnicity code system	CDCREC, 1002-5, American Indian or Alaska Native CDCREC, 2028-9, Asian CDCREC, 2054-5, Black or African American CDCREC, 2076-8, Native Hawaiian or Other Pacific Islander CDCREC, 2106-3, White CDCREC, 2131-1, Other Race