Measures Management System
Information Session

The MalNutrition Care Score: From Idea to CMS Quality Measure

Presenters:

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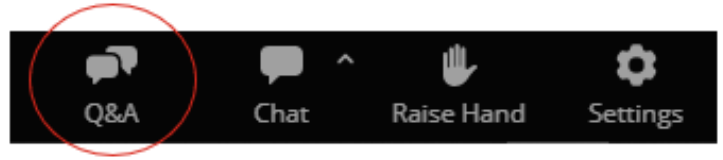
Want to Ask a Question?

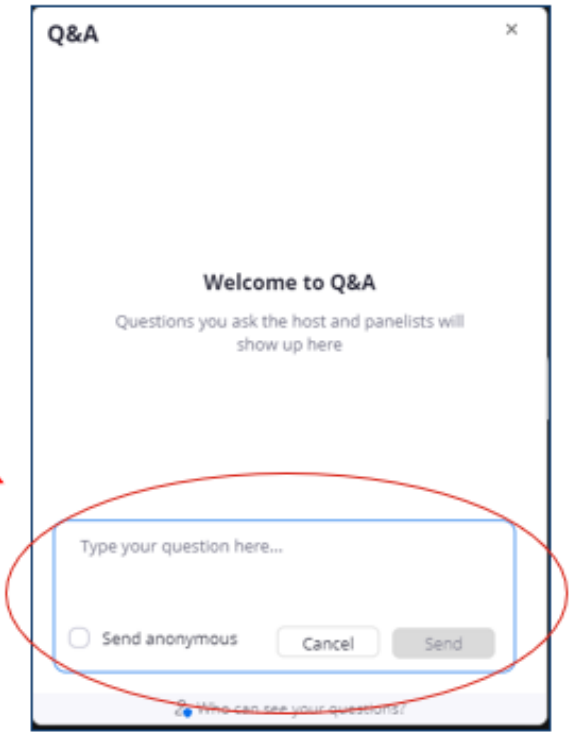
- Audience questions will be answered during the Q&A session at the end of the presentation.
- Instructions on how to submit questions:
  - Zoom Q&A Function
    - Please feel free to submit questions throughout the presentation.
- Note: If your question is not answered during the live Q&A, we will post FAQs to the CMS MMS Hub in a few weeks!

Want to Ask a Question?
Use the Zoom Q&A Function

Open the Zoom Q&A function



- Type your **question** into the question box
- Press **send** to submit



Introduction

Quality, Standards, and Interoperability Team
Malnutrition Care Score Measure Steward and Developer Team

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Managing Director,
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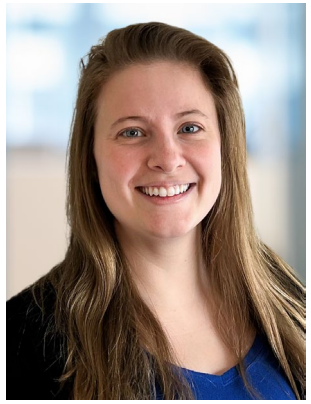
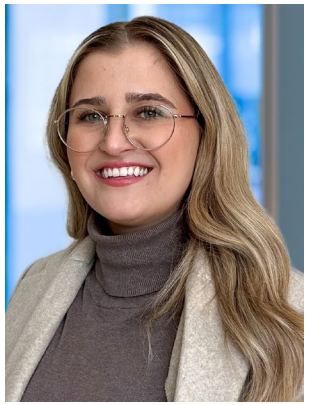
Caitlin Dodd
Consultant I,
Evidence & Strategy



Shayna Adams
Consultant I,
Evidence & Strategy



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MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

Avalere Health™

Learning Objectives

- Recognize the importance of RDNs identifying, diagnosing and treating malnutrition in acute care settings.
- Understand why the Malnutrition Care Score (MCS) as an electronic clinical quality measure is essential to improving malnutrition quality care.
- Evaluate and apply quality improvement strategies for malnutrition care.
- Examine the history of the Malnutrition Care Score and successful malnutrition quality improvement stories.
- Understand the steps necessary for successful measure development.

Microsoft Stock Photo

Malnutrition in the United States

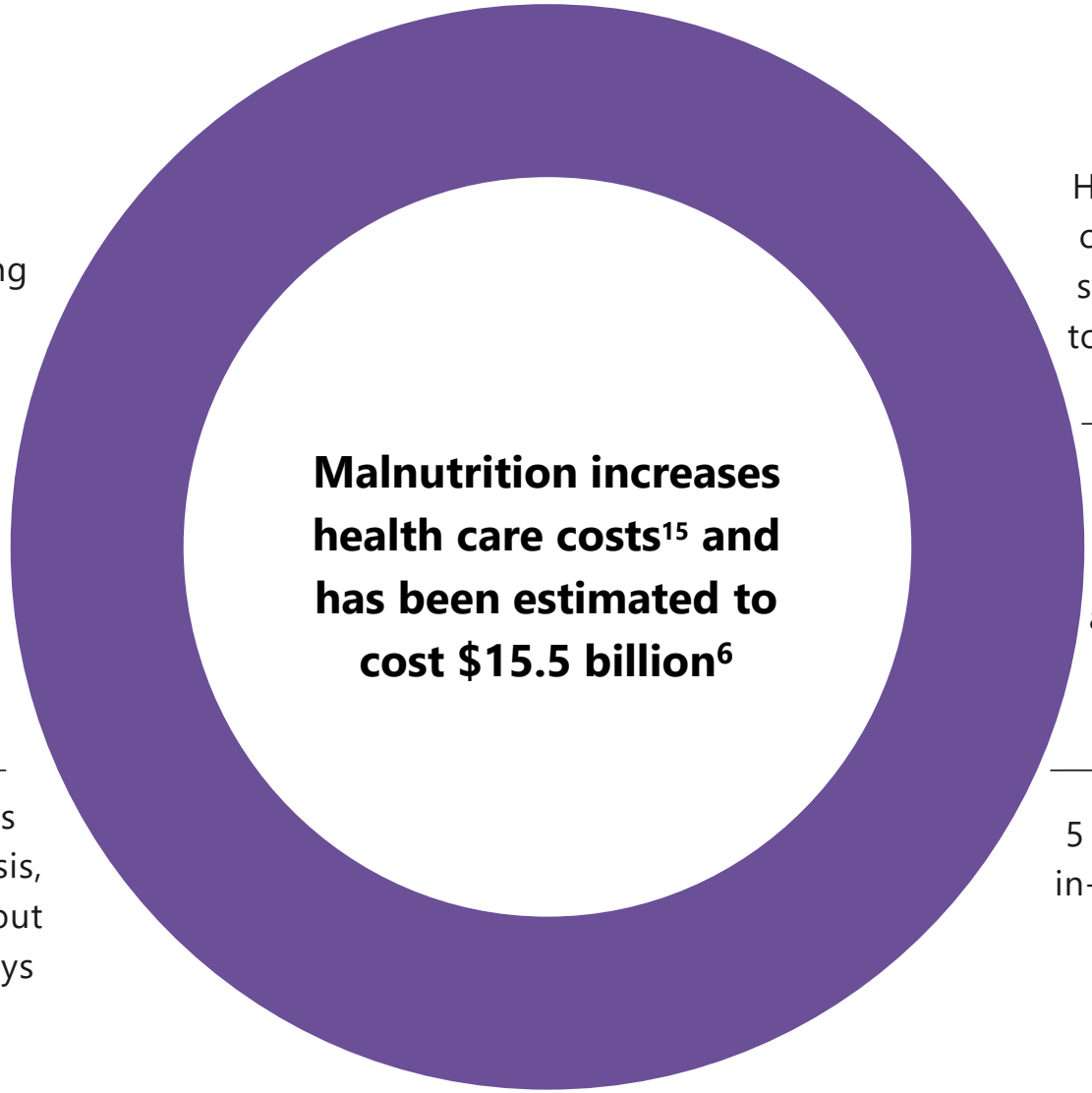
What is Malnutrition?

- Nutritional imbalance[1]
  - Protein energy malnutrition (PEM): inadequate intake of protein and/or calories that results in loss of fat stores, muscle mass, and function, and negatively impacts health[2]
  - Can occur in people who are both underweight or overweight (including obese)
- Inadequate intake of nutrients, particularly protein, over time
  - Lack of adequate nutrients to meet the body's needs
- Nutrition is considered as one of the strongest and most adjustable environmental factors that could be used to reduce the burden of disease during an individual's entire life[3,4]
- Different possible causes

Malnutrition in Acute Care

- Malnutrition could be present in all ages
  - 1 in 3 hospitalized patients are at risk for malnutrition[5]
- Malnutrition is not always identified and diagnosed at any adult age
  - 8% of non-neonatal and non-maternal adult hospitalizations were coded for malnutrition[6,7]
- Evidence supports:
  - Identification of malnutrition risk can predict certain patient outcomes, including length of stay, mortality, and post-operative complications [5, 8-12]
  - A measure that incentivizes early malnutrition screening, identification, diagnosis, intervention, and effective transitions of care[13-14]

Impact of Malnutrition in Health Care



Malnutrition increases health care costs[15] and has been estimated to cost $15.5 billion[6]

56% ↑

Likelihood of 30-day readmissions, with septicemia as the leading diagnosis upon readmission[15]

12% ↑

Readmission rates for patients with a malnutrition diagnosis, compared to patients without the clinical diagnosis (89.2% vs. 77.2%) [16-17]

4.3 days ↑

Length of stay for patients with a malnutrition diagnosis, compared to patients without the clinical diagnosis (9 days vs. 4.7 days)[17]

Cost ↑

Higher hospitalization cost of care: $23,579 vs. $13,610 per stay; accounting for 13.2% of total aggregate costs but only 8.9% of patients[17]

Risk ↑

Complications, as addressing malnutrition can help reduce the risk of infections, anemia, cardiac complications, gastrointestinal perforations, pressure ulcers, and falls[18]

Death ↑

5 x maximum likelihood of in-hospital death compared general patient population[16]

Clinical Guidelines for Addressing Malnutrition in Acute Care Settings[22]

Study Type	Major Findings
Clinical Guideline	• Screening for nutrition risk for hospitalized patients (Level V); • Nutrition assessment is suggested for all patients who are identified to be at nutrition risk by nutrition screening (Level V); and • Nutrition support intervention is recommended for patients identified by screening and assessment as at risk for malnutrition or malnourished. (Level III)

Levels of Evidence: I-Large randomized trials with clear-cut results; low risk of false-positive and/or false-negative error; II-Small, randomized trials with uncertain results; moderate to high risk of false-positive and/or false-negative error; III-Nonrandomized cohort with contemporaneous controls; IV-Nonrandomized cohort with historical controls; V-Case series, uncontrolled studies, and expert opinion.

Malnutrition Care Score (MCS)

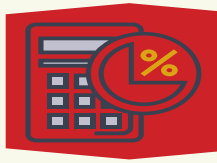
 | Contact quality@eatright.org for support

What is the Malnutrition Care Score?

Nutrition-related electronic Clinical Quality Measure in the IQR Program for Eligible Hospitals and Critical Access

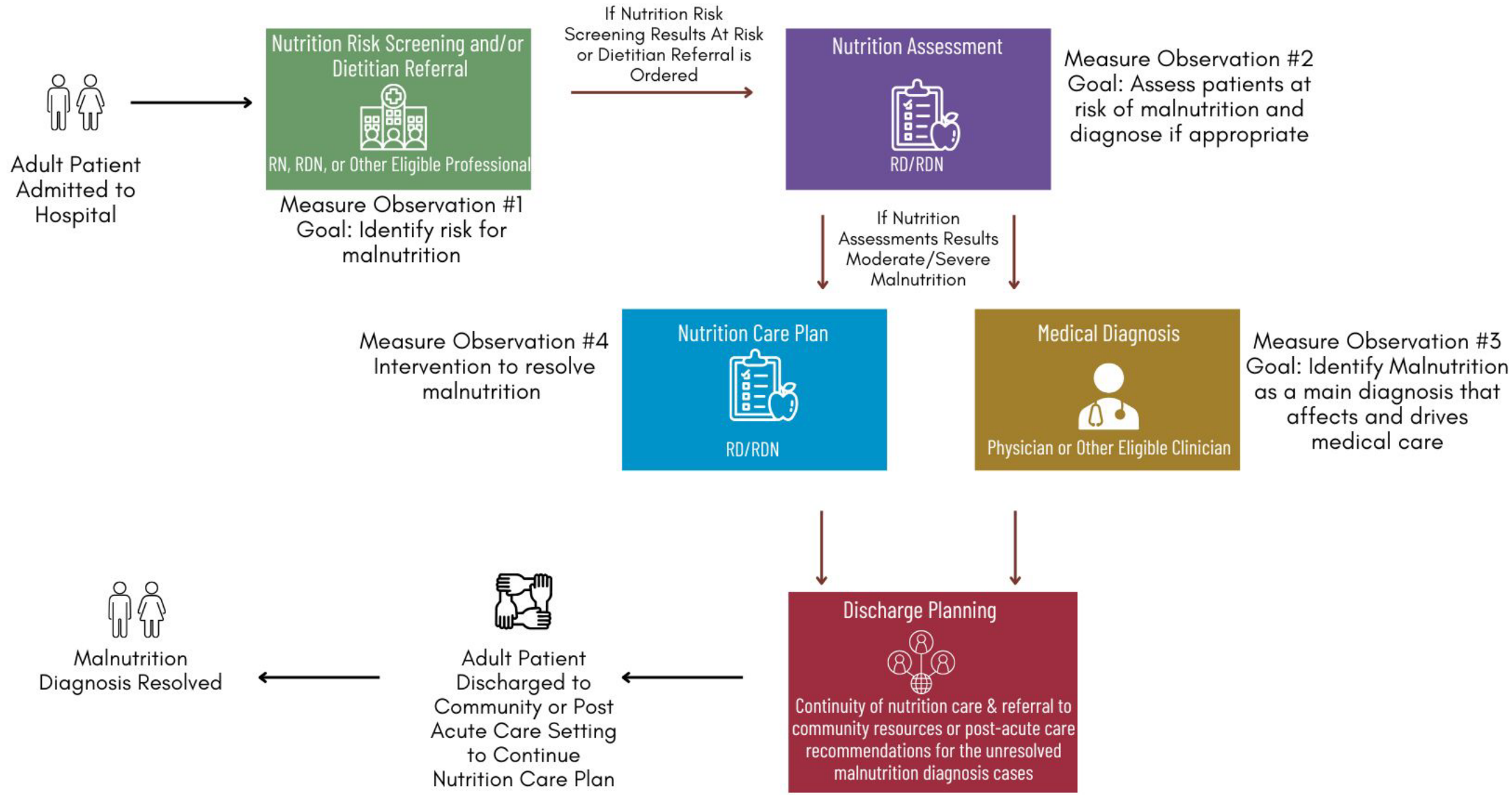
Focuses on identifying, diagnosing, & treating malnutrition in acute care

Highlights the importance of interdisciplinary care



Measure population: adults 18 years of age or older, with a length of stay of 24 hours or more

Evidence-Based Clinical Workflow for Malnutrition Care



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For additional information, email quality@eatright.org

MCS Data Elements and Attributes

MCS Data Element & Attributes*	#1 Screen	#2 Assess	#3 Diagnose	#4 Care Plan
Encounter Type+	√	√	√	√
Inpatient Admission Time+	√	√	√	√
Inpatient Discharge Time+	√	√	√	√
Date of Birth+	√	√	√	√
Completed Malnutrition Risk Screening	√	√		
Completed Malnutrition Risk Screening Time Stamp	√	√		
Completed Malnutrition Risk Screening Result	√	√		
Dietitian Referral	√	√		
Completed Nutrition Assessment		√	√	√
Completed Nutrition Assessment Time Stamp		√	√	√
Completed Nutrition Assessment Result			√	√
Active Malnutrition Diagnosis			√	
Malnutrition Diagnosis Time Stamp			√	
Completed Nutrition Care Plan				√
Completed Nutrition Care Plan Time Stamp				√

*All MCS data elements are readily available in an EHR
+Data elements used in other eCQMs
NOTE: Data elements in the same color bundle indicate linked data elements

Implementing the MCS as a Quality Improvement Project

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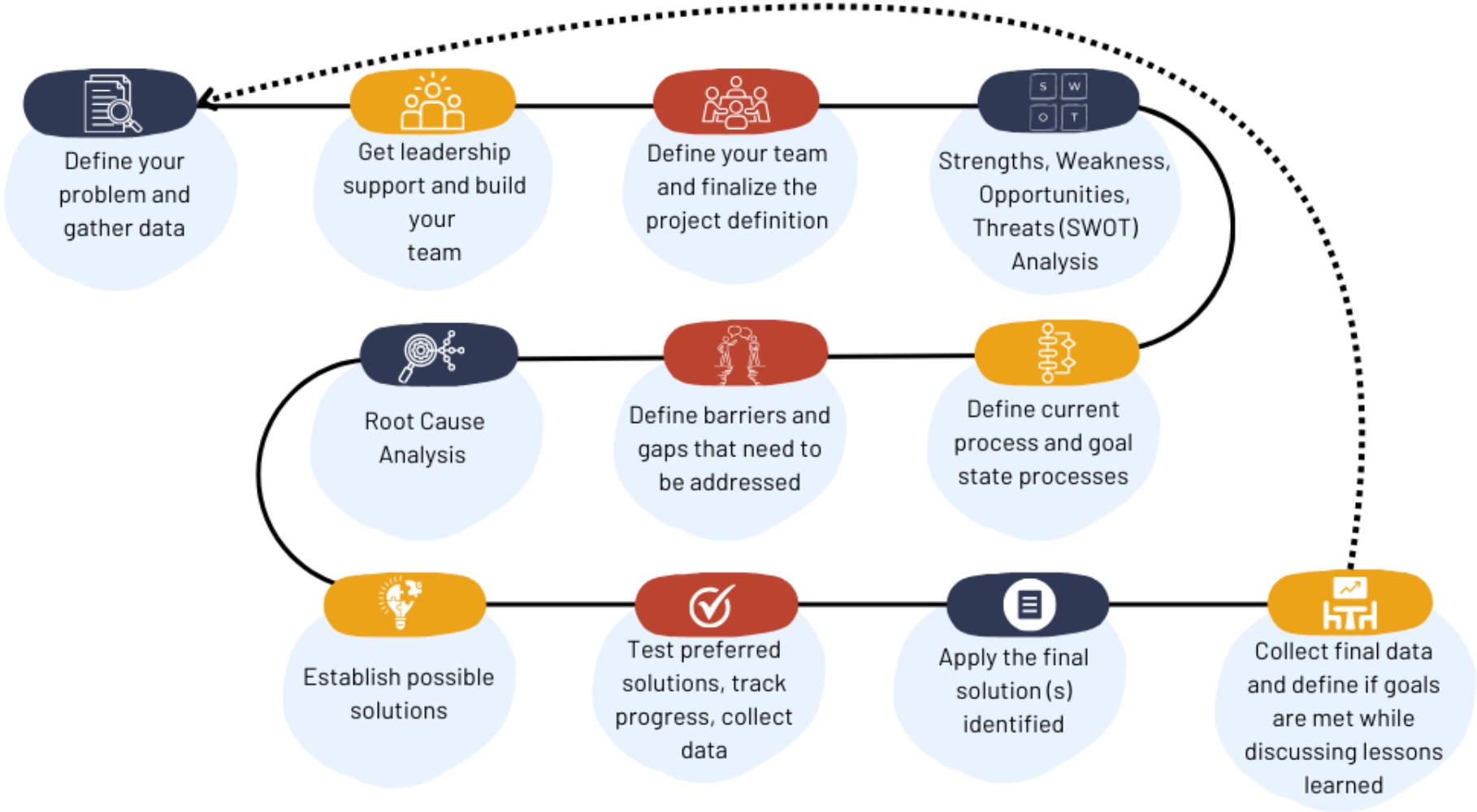
GENERAL STRUCTURE OF PROCESS IMPROVEMENT



Commission on Dietetic Registration
Academy of Nutrition and Dietetics

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Initiating a Quality Improvement Project

Strategies & Structure

Questions to consider…

- Where are you now?
- Who needs to be at the table?
- What training/education is needed?
- What communication needs to be disseminated?
- Are there documentation requirements that need to be considered?
- What data needs to be captured?
- What is the next right step toward the goal?

Sample Implementation Timeline

Phase 1
- Create Project Team
- Communication Plan
- Map Workflow
- Streamline Documentation
- Gather Baseline Data
- Create Structure, Standards, and Support

Phase 2
- Include External Resources / SME's
- Upskill RDN/NDTR staff
- Enhance Focus on Medial Providers
- EMR Optimization
- Increase Organizational Awareness
- Continue Narrowing Down QI Focus

Phase 3
- Executive Champion Meetings
- Expand Project Team as needed
- Ongoing Data Extraction & Evaluation
- Ongoing Communication at System Level
- Ongoing EMR Optimization
- Allow QI to Evolve with Growth Opportunities

Phase 4
- Hardwire Current QI Initiatives
- Ongoing Evaluation of Workflow and Gaps
- Create Dashboard or Method for Metrics Monitoring
- Routinely Report Data at System / Executive Level

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Data Considerations

- What data is important to your organizations?
  - Can you align with Mission, Vision, and Values.
  - What are the Key Performance Indicators your C-suite is looking at?
- How can you align?
- What data will speak to that alignment?
- Is it achievable and will it be meaningful?
- How will you show nutrition outcomes and the value of the RDN?

Holistic and Interdisciplinary Approach

EFFECTIVE MALNUTRITION MANAGEMENT BENEFITS FROM COLLABORATION

Administration

Acts as the nutrition champion, providing practical support and quality and financial goals and guidance

Pharmacists

Evaluate drug-nutrient interactions and support the rest of the team

Nursing Staff

Performs nutrition screening and supports innovative strategies to facilitate patient compliance

Credentialed Nutrition and Dietetics Practitioners

Complete the nutrition assessment, identify malnutrition, develop or support care plan and discharge planning, within scope of practice

Physicians and Eligible Clinicians

Oversee the overall care plan and documentation to support awareness of malnutrition diagnosis and reimbursement for care being offered

Information Technology and Electronic Health Record

Implement templates and facilitate process for data collection and reporting

Adapted from recommendations by Tappenden KA, Quatrara B, Parkhurst M, Malone A, Fanjiang G, Ziegler T. Critical role of nutrition in improving quality care: an interdisciplinary call to action to address adult hospital malnutrition. *J Acad Nutr Diet*. 2013, 113 (9): 1219-1237.

Commission on Dietetic Registration

For additional information, email quality@eatright.org

History of MCS and Improvement Success Stories

The MQii Learning Collaborative Tested Measure Feasibility and the Impact on Outcomes

The MQii Learning Collaborative was established in 2016 through a partnership between the Academy and Avalere Health as a community of hospitals committed to improving delivery of inpatient malnutrition care in the US.

In 2017, 50 hospitals across the United States participated in the Learning Collaborative which provided tools and training that hospitals then implemented in their facilities and shared their progress and lessons learned with other members.

To support the formal measure testing requirements and to provide evidence that the measure was feasible, valid, and had a measurable impact on outcomes (reduced readmissions!), a subset of Learning Collaborative member hospitals sent in quarterly data sets from their EHRs on the measure components using the draft measure specifications.

MQii continues to serve Learning Collaborative participants with tools and resources to support improving malnutrition care across the patient journey.

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https://malnutritionquality.org/mqii-learning-collaborative/

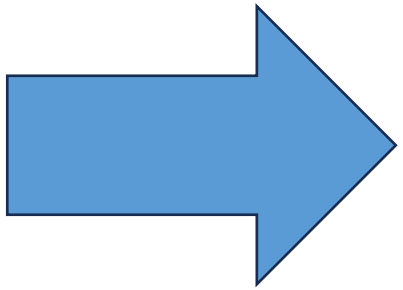
MCS: Malnutrition Care Score; MQii: Malnutrition Quality Improvement Initiative.

The development of the MCS occurred over the course of several years

Avalere, in collaboration with the measure steward—the Academy of Nutrition and Dietetics (Academy)—developed the MCS eCQM as part of the MQii.

2013-2015

The Academy and Avalere partner in studying the state of malnutrition care and developing a quality measurement-focused strategy to address the problem



2016

Four malnutrition-focused quality measures developed

- The four measures were developed, tested, and published
- The measures were submitted to the NQF MAP for consideration in quality reporting use
- CMS recommended combining the four measures into one composite measure

2020

Merged into one single malnutrition-focused quality measure (GMCS)

- The four malnutrition-focused quality measures were combined into the single GMCS
- The measure was submitted to the NQF MAP for consideration in quality reporting use

2022

The FY 2023 IPPS Final Rule adopts GMCS as new eCQM in Hospital IQR Program

- The FY 2023 IPPS Final Rule, included the addition of the MCS to the Hospital IQR Program
- Beginning in 2024, hospitals can self-select and report on the GMCS

2024

Measure goes live in the Hospital IQR program as of Performance Year 2024

- The FY 2025 IPPS Final Rule expanded the GMCS to include all adults ages 18 and up
- Measure expansion becomes effective with the 2026 performance year

In the FY2026 IPPS rule, the GMCS was renamed to the MCS ("Malnutrition Care Score")

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eCQM: electronic clinical quality measure; GMCS: Global Malnutrition Composite Score; MAP: Measures Application Partnership; MQii: Malnutrition Quality Improvement Initiative; NQF: National Quality Forum

Two Hospitals' Experiences with Implementing Data Collection and Quality Improvement Strategies

Two Learning Collaborative members from two separate health systems were part of the initial cohort who tested the feasibility of data collection and the impact of efforts to raise MCS scores on patient outcomes.

Key components of their experiences included:

- Their work internally to adapt their EHR for optimal data collection aligned with clinical workflow
- The development of ongoing quality data reports,
- The gathering of a QI team for overall malnutrition care process improvement
- Their work to engage their leadership to prioritize the (G)MCS measure

Please note the two hospital case studies are longtime collaborators on the measure and some of the slide content reflects data elements/specifications that differ slightly from the most current specifications for CMS reporting. Please work with your EHR vendor and IT team to ensure your facility is using the most recent MCS measure specifications to design your processes.

MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

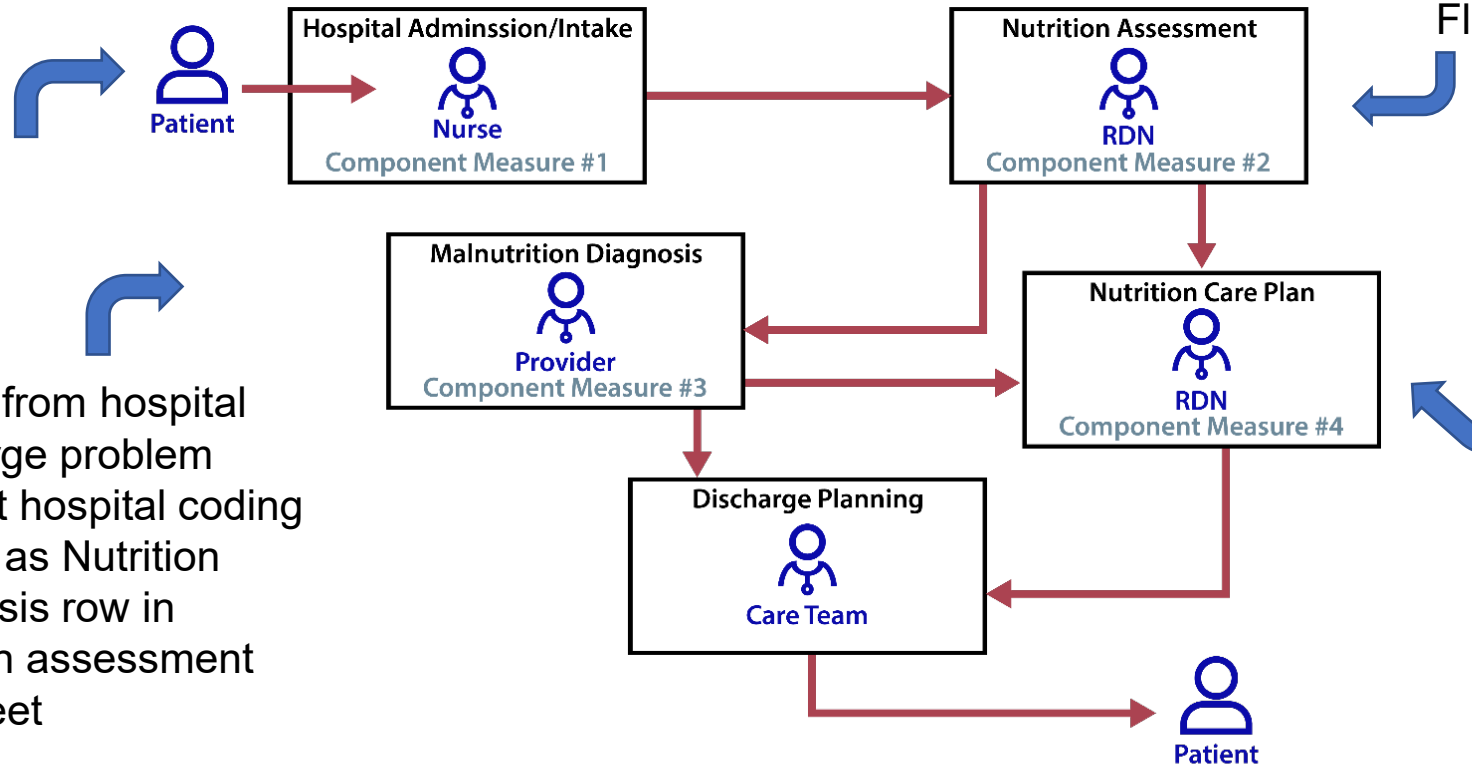
CMS: Center for Medicare & Medicaid Services; EHR: electronic health records; IT: information technology; GMCS: Global Malnutrition Composite Score; MCS: Malnutrition Care Score; QI: quality improvement.

Case Study #1: Clinical Workflow Mapped to the MCS Elements

Workflow

Pulling from MST screening on admission

Pulling from Assessment Type of Nutrition Flowsheet



Pulling from hospital discharge problem list/post hospital coding as well as Nutrition Diagnosis row in nutrition assessment flowsheet

Pulling from Malnutrition Plan section of Nutrition Flowsheet

- A not-for-profit integrated health system, 9+ hospitals, more than 1,500+ providers
- EHR: EPIC

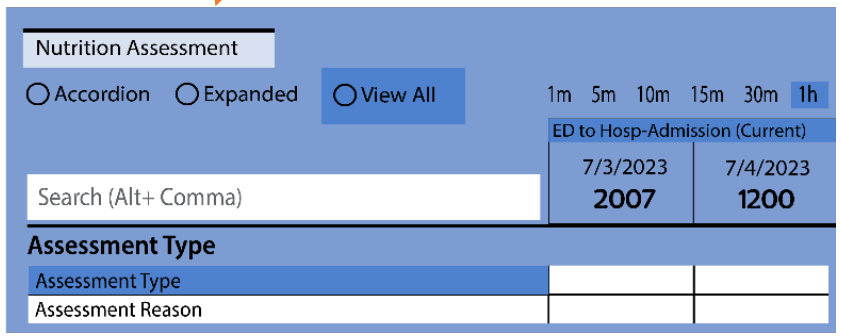
MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

MCS: Malnutrition Care Score; MST: Malnutrition Screening Tool.

Flowsheets and Reports were Built to Mirror MCS Elements

Nutrition Assessment

Flowsheets



Risk Assessment

Malnutrition Diagnosis
(denominator - pick either Moderate Malnutrition or Severe Malnutrition from drop down list)

@malnutrition@smartlink
-double check spelling of free text as this will flow into provider note
-both assessment and plan flow over and both need to be filled in

Malnutrition Care Plan

Physical Findings		
Physical Findings		Subcutaneous
Bilateral muscle wasting (upper)		Clavicles (pe..
Bilateral muscle wasting (lower)		
Subcutaneus fat loss		Buccal fat
Nutrition Findings		
Additional Information		Noted Patient r
Hand Dynamometer		
Pertinent Lab Results		
Pertinent Labs		
Level of Care		
Nutrition Risk		moderate
Follow-up Date		7/8/2023
Nutrition Diagnosis		
Nutrition Diagnosis		Moderate Mai
PES Comment		related to inad
Nutrition Diagnosis 2		
PES Comment 2		
Malnutrition		
Malnutrition Assessment		Moderate mai
Malnutrition Plan		Multivitamin w
Nutrition Prescription		
Nutrition Prescription		Regular diet
Plan/Recommendations		
Calorie Counts		
Calories and Protein		
Collaboration/Nutrition Care Plan		Collaborated w
Education		Remain availa
Labs		Monitor Labs
Menu Selection		Monitor Intake
Oral Intake		Encourage ade
Referrals		
Skin Integrity/Wound Healing		
Supplements		Recommend s
TPN		
Tube Feedings		
Weights		Standing Scale
Additional Nutrition Plan/Recommendations		RD will send E

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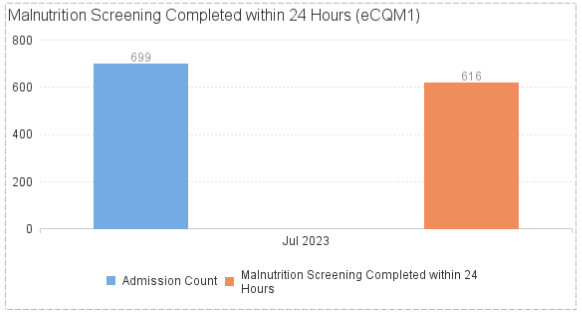
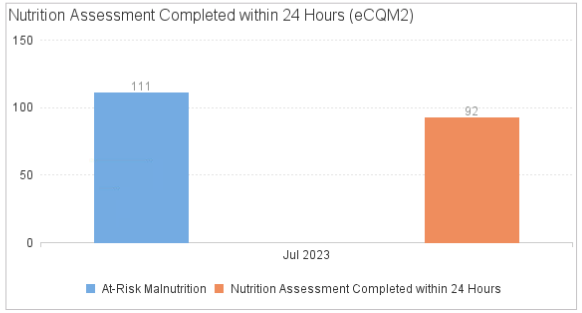
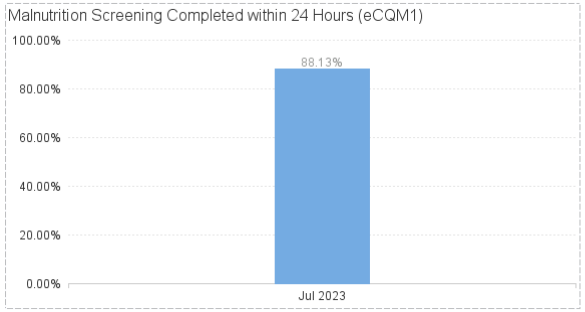
The Hospital Used Real-Time Performance Reports to Track Each Measure Component and Stratify Results

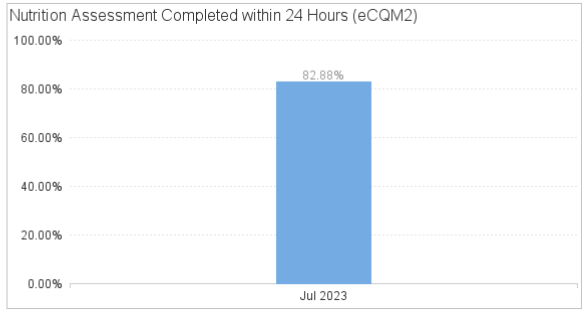
Real-Time Performance Reporting

Location(s)	[redacted]	Malnutrition DX(s)	All Patients
Date Range	7/1/23 to 7/31/23	Malnutrition Result	All Patients
Adult vs. Pediatric	Adult	Care Plan Presence	All Patients
Adult Group	All Ages		









Performance Feedback Report

Date Range: 7/1/23 to 7/31/23

Metric	July 2023	Total
Malnutrition Screening Completed within 24 Hours (eCQM1)	88.13%	88.13%
Nutrition assessment Completed within 24 Hours (eCQM2)	82.88%	82.88%
Appropriate Diagnosis of Malnutrition (eCQM3)	62.22%	62.22%
Nutrition Care Plan Documentation (eCQM4)	97.22%	97.22%
Hospital Malnutrition Diagnosis Rate by Age Group	5.15%	5.15%
30 Day Readmission Rate (general population)	11.46%	11.46%
30 day Readmission Rate (with malnutrition dx)	25.00%	25.00%
Average Length of Stay (general population)	3.83	3.83
Average Length of Stay (with malnutrition dx)	6.96	6.96
Aggregate Total Malnutrition components Score as a percentage at the hospital Level	86.86%	86.86%

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Lessons Learned

Dietitian Workflow

- Different hospital sites have different charting, coding, order writing, and staffing capabilities

EPIC Workflow

- Dashboard build had to be customized
- The measures in the Future Planned Measure Support section are still pending program inclusion in Inpatient Prospective Payment Systems Final Rules. Because they are early in their design and development, measures in this section might not be released for a while

Having all the right stakeholders involved ensured success

- Clinical Nutrition Managers
- Manager of Quality Reporting
- Director, Senior Director, VP, and Chief of Quality and Safety
- Associate and System Analysts
- Senior Director of Operations and Ancillary Services
- Accreditation and Regulatory Affairs Manager and Senior Director
- Improvement Specialist
- Quality Data Analyst

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Case Study #2: Evolution of Malnutrition Committee

January 2016

- Physician Champion
- Director of Reimbursement/Revenue Cycle
- Director of Process Improvement
- CNM
- Dietitian

November 2018

- Physician Champion
- Director of Reimbursement/Revenue Cycle
- Director of Process Improvement
- CNM
- Dietitian
- Quality Improvement Analyst

March 2020

- CNM
- Health Information Integrity Specialists

October 2022

- Physician Champion
- CNM
- Health Information Integrity Specialists

September 2023

- Physician Champion
- CNM
- Health Information Integrity Specialists
- Epic Informaticist

October 2023

- Physician Champion
- CNM
- Health Information Integrity Specialists
- Epic Informaticist
- Process Improvement Engineer

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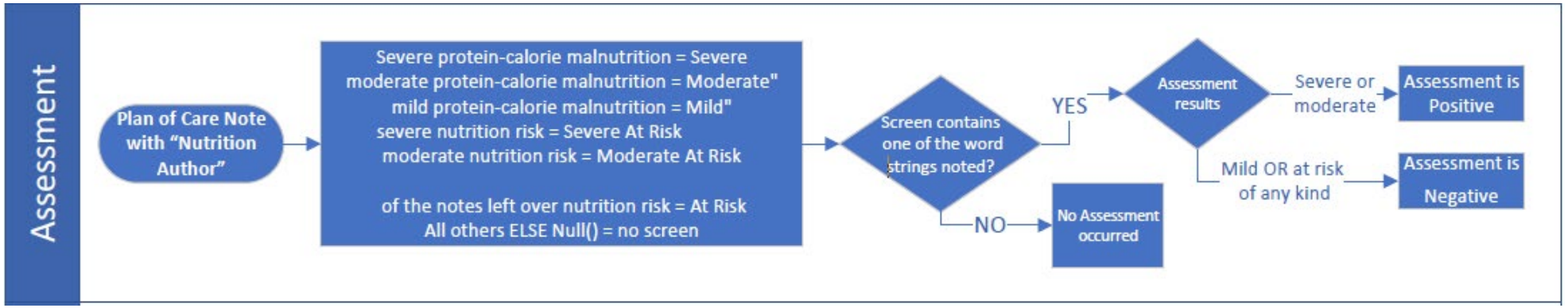
CNM: Clinical Nutrition Manager

MCS Implementation - Assessment



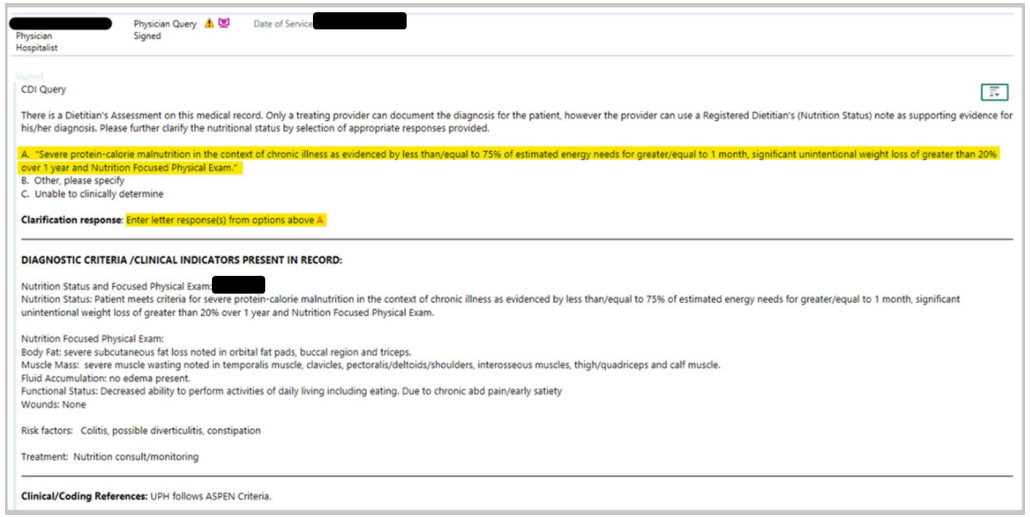
Clinical Nutrition Note

[redacted] Plan of Care
Registered Dietitian Nutrition
Signed
Date of Service: [redacted]

Clinical Nutrition Note

Nutrition Status:
Patient meets criteria for moderate protein-calorie malnutrition in the context of acute illness as evidenced by less than 75% of estimated energy needs for greater/equal to 1 month, significant unintentional weight loss of 7.5% over 3 months and Nutrition Focused Physical Exam .

Physician Query


[redacted] Physician Query
Physician Hospitalist
Signed
Date of Service [redacted]

CDI Query

There is a Dietitian's Assessment on this medical record. Only a treating provider can document the diagnosis for the patient, however the provider can use a Registered Dietitian's (Nutrition Status) note as supporting evidence for his/her diagnosis. Please further clarify the nutritional status by selection of appropriate responses provided.

A. "Severe protein-calorie malnutrition in the context of chronic illness as evidenced by less than/equal to 75% of estimated energy needs for greater/equal to 1 month, significant unintentional weight loss of greater than 20% over 1 year and Nutrition Focused Physical Exam."
B. Other, please specify
C. Unable to clinically determine

Clarification response: Enter letter response(s) from options above A

DIAGNOSTIC CRITERIA /CLINICAL INDICATORS PRESENT IN RECORD:

Nutrition Status and Focused Physical Exam: [redacted]
Nutrition Status: Patient meets criteria for severe protein-calorie malnutrition in the context of chronic illness as evidenced by less than/equal to 75% of estimated energy needs for greater/equal to 1 month, significant unintentional weight loss of greater than 20% over 1 year and Nutrition Focused Physical Exam.

Nutrition Focused Physical Exam:
Body Fat: severe subcutaneous fat loss noted in orbital fat pads, buccal region and triceps.
Muscle Mass: severe muscle wasting noted in temporalis muscle, clavicles, pectoralis/deltoids/shoulders, interosseous muscles, thigh/quadriceps and calf muscle.
Fluid Accumulation: no edema present.
Functional Status: Decreased ability to perform activities of daily living including eating. Due to chronic abd pain/early satiety
Wounds: None

Risk factors: Colitis, possible diverticulitis, constipation

Treatment: Nutrition consult/monitoring

Clinical/Coding References: UPH follows ASPEN Criteria.

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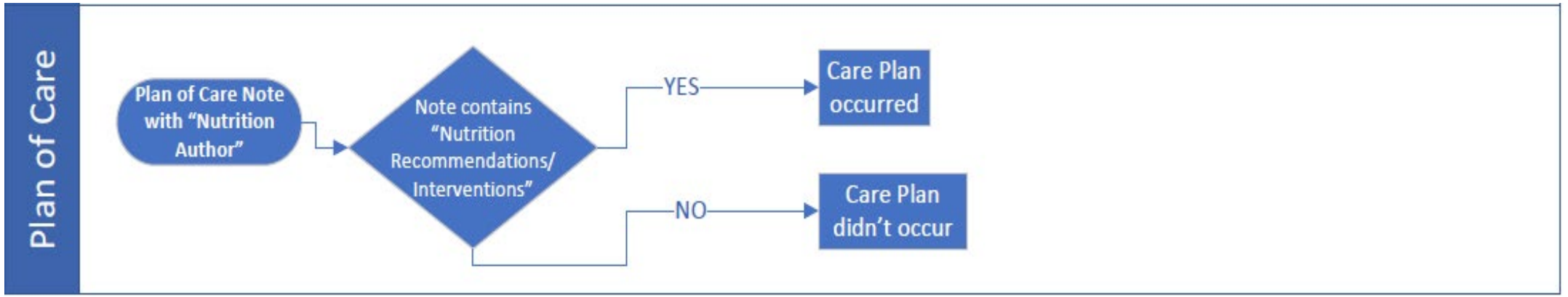
MCS: Malnutrition Care Score.

MCS Implementation – Nutrition Care Plan



Nutrition Recommendations/Interventions:

- Diet: heart healthy
- Supplements: Continue Ensure Enlive BID.
- Continue to encourage nutrient dense foods to optimize nutrition status.
- Request current weight.
- Recommend Thera M Plus multivitamin with minerals.
- Monitor wt,labs and po intake

MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

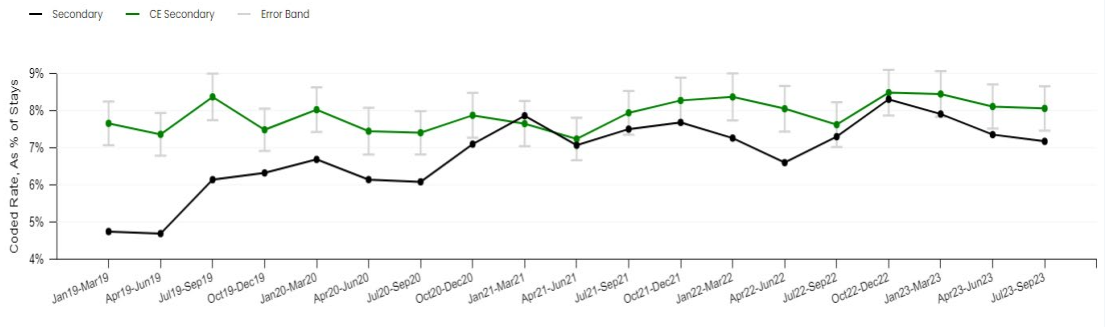
MCS: Malnutrition Care Score.

Hospital 2: Lessons Learned

Learnings & Adaptations

Monthly data shared departmentally and individually

- Colorectal, hospitalists, surgery, cardiothoracic, trauma, internal med, mid-level providers, pediatric
- Considered "low-hanging fruit"
- Individual able to see how they stand compared to department
- Improved awareness and ongoing education
- Monthly tipsheets



Barriers to Implementation

- Currently "siloed." The main hospital set up to capture data due to involvement in MQii. Able to capture "unofficial" score, but somewhat of a manual process
- Epic upgrade in 2024 to hopefully allow data capture across system
- Suspect that not all affiliates chart/document the same
- Physician buy-in
- MCS requires data entered by providers, nurses, RDs; difficult to know where to pull data from
- Identifying correct contact to set up measure to report to CMS

What Was Most Helpful

- **Must** have a TEAM!
- Physician Champion, Quality Improvement, Process Improvement, Informaticist, Health Information Integrity Specialists

MQii™
MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

Thank You!

Questions or Comments can be sent to:
Quality@eatright.org

 | Contact quality@eatright.org for support

Questions?

Battelle
MMSSupport@battelle.org

CMS
Gequincia Polk
gequincia.polk@cms.hhs.gov

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