Malnutrition Quality Improvement Opportunities for the District Hospital Leadership Forum

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Malnutrition Has a Significant Impact on Patient Outcomes

MALNUTRITION IS ASSOCIATED WITH A HIGH BURDEN OF DISEASE, INCREASED COMORBIDITIES, AND SIGNIFICANT ECONOMIC COSTS.

1 in 3 patients
are malnourished upon admission[1,2]

31 percent
of patients experience declines in nutrition status during their hospital stay[3]

Malnutrition-associated outcomes include
depression of the immune system, impaired wound healing, and muscle wasting[4]

Malnutrition increases length of stay by
4 to 6 days[4]

Malnutrition increases costs by
up to 300 percent[5]

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1 Coats KG et al. Hospital-associated malnutrition (a reevaluation 12 years later). *J Am Diet Assoc.* 1993; 93:27–33.
2 Giner M et al. In 1995 a correlation between malnutrition and poor outcome in critically ill patients still exists. *Nutrition* 1996; 12:23-29.
3 Braunschweig C et al. Impact of declines in nutritional status on outcomes in adult patients hospitalized for more than 7 days. *J Am Diet Assoc.* 2000; 100:1316-1322.
4 Barker et al., Hospital Malnutrition: Prevalence, Identification and Impact on Patients and the Healthcare System. *J Environ Res Public Health.* Feb 2011; 8(2): 514–527.
5 Isabel TD and Correia M. The impact of malnutrition on morbidity, mortality, length of hospital stay and costs evaluated through a multivariate model analysis. *Clinical Nutrition.* 2003;22(3):235–239.

There Have Been Limited Quality Improvement Efforts in the U.S. to Address Malnutrition Care

SOME LOCAL QI PROGRAMS HAVE A MALNUTRITION-RELATED COMPONENT, BUT AN ENVIRONMENTAL SCAN SUGGESTS THERE ARE **NO U.S.-BASED MALNUTRITION QI INITIATIVES TO DATE**

Washington Surgical Care and Outcomes Assessment Program[1]

- Includes nutrition-related care processes and data collection (e.g., nutrition status assessment) pre- and post-surgery to improve surgical outcomes

American Nurses Association Hospital eMeasure Development[2,3]

- Develops hospital-based eMeasures focused on healthcare problems associated with malnutrition, such as pressure ulcers and fall prevention

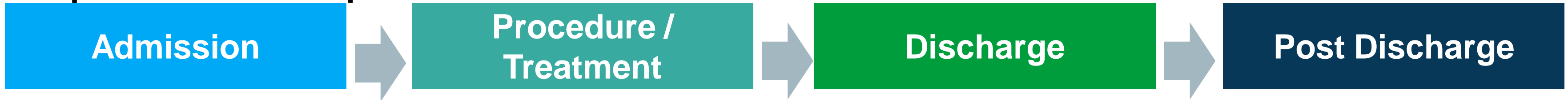
Illinois Surgical Quality Improvement Collaborative[4]

- Implements ACS' NSQIP recommendations, including nutritional assessment, to optimize outcomes for surgery patients

QI: Quality Improvement; ACS NSQIP: American College of Surgeons; NSQIP: National Surgical Quality Improvement Program
1. Surgical Care and Outcomes Assessment Program: A Program of the Foundation for Health Care Quality. http://www.scoap.org/.
2. The American Nurse. ANA, CMS Officials Meet to Discuss Health Care Reform, Nurses' Role. May 1, 2014. http://www.theamericannurse.org/index.php/2014/05/01/ana-cms-officials-meet-to-discuss-health-care-reform-nurses-roles/ . 3. American Nurses Association. ANA's Pressure Ulcer Cumulative Incidence eMeasure (ePressUlcer). 2014.
4. Illinois Surgical Quality Improvement Collaborative. http://www.isqic.org/.

Malnutrition Care Is Further Inhibited by a Lack of Robust Quality Measures

Hospital Admission Episode of Care



	Admission	Procedure / Treatment	Discharge	Post Discharge
Existing Related Measures	• Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls • Screening for Dysphagia (patients with stroke) • Preventive Care and Screening: BMI Screening and Follow-Up*		• Transition Record with Specified Elements Received by Discharged Patients	
Measure Gaps	• Screening • Assessment and diagnosis • Early intervention • ONS for mal-nourished/at risk	• Nutrition care plan implemented • Nutrition intervention • Monitoring of nutrition intake • Weekly screening	• Nutrition care plan included in discharge planning	• Nutrition care plan post-discharge

- Comprehensive intervention / protocol: screening, counseling, oral nutritional supplements
- Coordination of care intervention / communication

Evidence-based, systematic measurement to support malnutrition care can improve outcomes for hospitalized elderly patients

ONS: Oral nutritional supplement

*Please note that this measure was developed for the outpatient setting

Malnutrition Quality Improvement Addresses a Number of Gap Areas Prioritized by CMS and NQF

Prioritized Measure Gap Areas	
Appropriateness/Efficiency	Burden on Patients and Families
Communication	Patient Experience and Satisfaction
Patient Follow-up	Ambulatory Safety
Direct Costs	Medication Adherence/Use
Effective Preventive Services	Shared Decision-making
Functional Status	Patient Self-management
Medication Management	Prevention of Serious Events
Accountability for Care Coordination	Indirect Costs
Use of Care Plans	Standardized HAI Rates
Patient Engagement	Productivity
Health Lifestyle Behaviors	Patient Activation

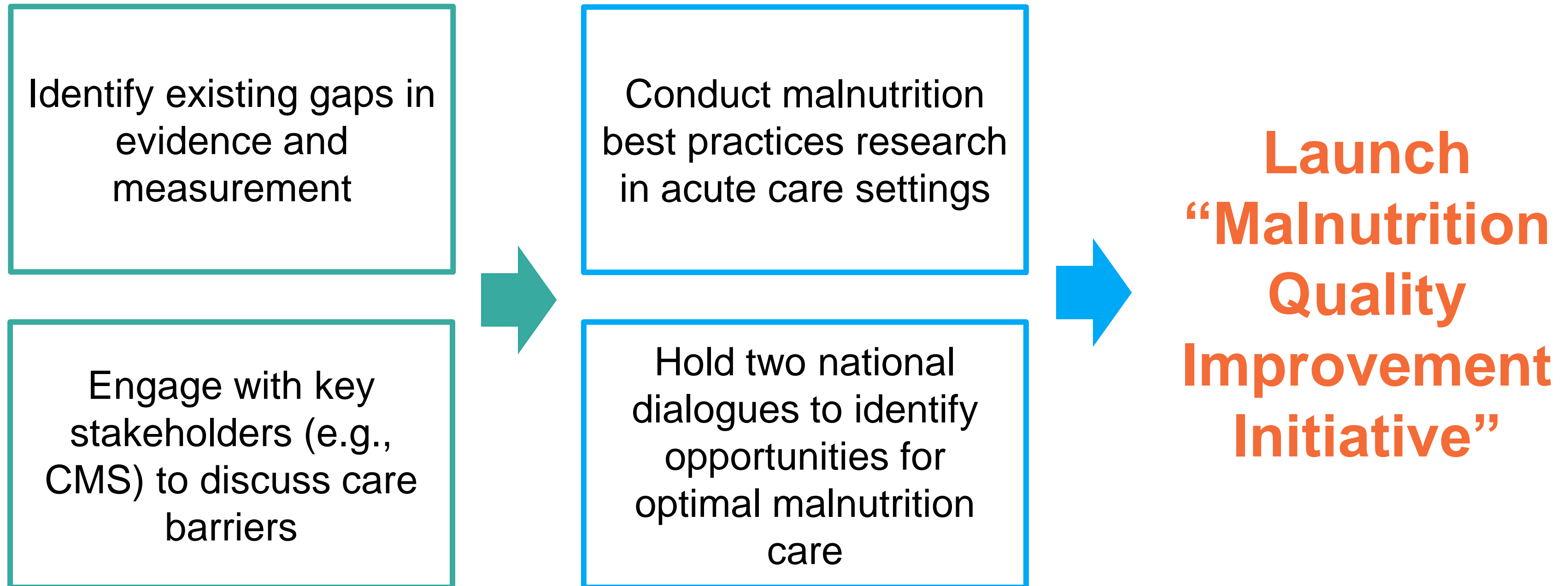
National Quality Strategy priority areas emphasize safety, care coordination, prevention, patient/family engagement, best practices for healthy living, and cost savings

NQF: National Quality Forum, CMS: Centers for Medicare & Medicaid Services, HAI: Hospital-Acquired Infections

Source: National Quality Forum, "Measure Prioritization Advisory Committee Report." May 2010, http://www.qualityforum.org/Publications/2010/05/Committee_Report,_Prioritization_of_High-Impact_Medicare_Conditions_and_Measure_Gaps.aspx.

New Malnutrition Quality Improvement Initiative Aims to Address Gaps and Barriers to Quality Care

GIVEN THE LACK OF MALNUTRITION-FOCUSED QI EFFORTS AND THE NEED TO ADVANCE MEASURES IN THIS SPACE, NUTRITION STAKEHOLDERS HAVE LAUNCHED A NEW QUALITY INITIATIVE



High quality nutrition care has been shown to decrease complications by 14% and avoidable readmissions by 28%[1]

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Malnutrition Quality Improvement Efforts Have Multi-stakeholder Support

SNAPSHOT OF ORGANIZATIONS WITH REPRESENTATIVES PARTICIPATING IN MALNUTRITION QUALITY IMPROVEMENT INITIATIVE DIALOGUES

Professional Societies

- Academy of Medical Surgical Nurses
- Academy of Nutrition and Dietetics
- American Nurses Association
- American Society for Parenteral and Enteral Nutrition
- Society of Hospital Medicine

Government Agencies

- Centers for Medicare & Medicaid Services
- Office of the National Coordinator for HIT

Patient Organizations

- Alliance to Advance Patient Nutrition
- American Kidney Fund
- National Partnership for Women and Families
- National Association of Nutrition & Aging Services Program

Hospitals and IDNs

- Geisinger
- North Fulton Hospital
- University of Illinois at Urbana Champaign
- University of Michigan Health System

Trade Associations

- AdvaMed
- American Hospital Association

Other Organizations

- Abbott
- EHR Association and McKesson
- Healthwise
- The Joint Commission

Representatives from many of these organizations remain involved in the MQII work in an advisory capacity and provide ongoing guidance to these efforts

EHR: Electronic Health Record
HIT: Health Information Technology

What is the Malnutrition Quality Improvement Initiative (MQII)?

THE MQII INTENDS TO SUPPORT AND ADVANCE IMPROVED CARE QUALITY FOR AT-RISK AND MALNOURISHED OLDER ADULTS

MQII Objectives

- Demonstrate how to improve malnutrition care with an interdisciplinary care team roadmap (toolkit) focused on decreasing time to identification and treatment of malnourished and at-risk hospitalized older adults
- Develop malnutrition quality measure(s) "that matter" – to help improve outcomes that are important to patients and clinicians
- Advance tools and measures that can be integrated into existing EHR systems to help improve quality care while minimizing administrative burden

The MQII is focused on older adults (ages 65 and older) given the significant impact malnutrition has on this patient population and the notable opportunity to improve care among these patients

The MQII is Rooted in a Set of Core "Guiding Principles"

The MQII is **founded on evidence demonstrating that nutrition intervention can improve patient clinical outcomes and lower cost of care for malnourished and at-risk hospitalized adults**, including decreasing morbidity and mortality, hospital-acquired conditions, and complications, enhancing care transitions, and reducing patient length of stay and unplanned readmissions

It aims to:

- **address the gap in optimal malnutrition care** delivery for hospitalized older adults (ages 65+) based upon evidence across the entire spectrum of malnutrition care delivery, including screening, assessment, diagnosis, nutrition intervention, and discharge planning
- **advance early screening, assessment, diagnosis and prompt nutrition intervention** for malnourished and at-risk hospitalized older adults
- **promote patient-driven nutritional intervention** that incorporates patient preferences and risk factors
- defines nutrition interventions as **standard or specialized diets, oral nutrition supplements, tube feeding, parenteral nutrition, and patient education or counseling**
- promote patient safety and improve patient outcomes with malnutrition care coordination across **all members of the care team, including patients, families**, dietitians, physicians, nurses, and other healthcare professionals
- **enhance access to and visibility of nutrition care plans** through integration of malnutrition care documentation in standardized electronic health record (EHR) templates

The MQII Will Introduce a Hospital-Based Demonstration to Improve Malnutrition Care

MQII Demonstration Design

3 Months	3 Months	1+ Months
Pre-Demonstration Phase	**Demonstration Phase**	**Post-Demonstration Phase**

Pre-Demonstration Phase (3 Months)

- Protocol design
- Creation of MQII toolkit
- Site recruitment (both Demonstration site and Learning Collaborative sites)
- IRB submission
- Baseline data collection (e.g., hospital characteristics, clinical workflow, etc.)
- Creation of web portal
- Contracting and training
- Feasibility assessment for toolkit

Demonstration Phase (3 Months)

- Implementation of toolkit in hospitals (demonstration and Learning Collaborative sites)
- Data collection on toolkit implementation, changes to clinical practice
- Rapid cycle identification of barriers to toolkit use and assistance to change practices
- Support for hospital implementation (e.g., "office hours," responses to care team questions, etc.)

Post-Demonstration Phase (1+ Months)

- Assessment of toolkit implementation
- Assessment of changes in clinical practice variability
- Pre/post analysis of malnutrition knowledge attainment
- Pre/post analysis of length-of-stay and readmission rates

The MQII Demonstration will introduce a toolkit for all hospital-based care team members to support better coordinated and higher quality malnutrition care*

* While the components of the toolkit have been well-validated and, in many cases, reflect best practices being used in some hospital sites, the MQII Demonstration offers the opportunity to bring together varied and inconsistent implementation of these practices and evaluate their implementation and dissemination to a variety of team members.

There Has Been Significant Interest in the MQII Demonstration from Hospitals Across the Country

2

N=21

Location of a hospital that has expressed interest in the MQII Demon-stration

If the District Hospital Leadership Forum chooses to use the toolkit, it will have already been evaluated in numerous sites through the demonstration, making it an even more rigorous tool with documented benefits

Reflects hospital interest as of May 12, 2015

The Toolkit Offers a "Turn Key" Approach for Hospitals to Support Improved Malnutrition Care

The Toolkit intends to:

- Provide a **feasible and usable malnutrition quality improvement toolkit** that can be easily deployed by a multi-provider care team in an acute setting
- **Reduce clinical practice variability** related to malnutrition care
- **Improve knowledge** of the importance of malnutrition and best practices for optimal malnutrition care delivery
- **Reduce the cost of care** associated with patients who are malnourished or at-risk for malnutrition

MQII Demonstration Toolkit Overview

Introduction

- Introduction to Toolkit
- Introduction to the MQII
- Business Case for the MQII

Before You Start

- Principles of Quality Improvement
- Building Your Team
- Understanding Your Existing Workflow
- Defining Your Data
- Institutional Project Management

Getting Started: Implementation

- Review and Understand Recommended Toolkit Workflow
- Determine Data Capture Mechanism
- Train Care Team
- Implementation and Evaluation

Keeping it Going

- Continue to Track Progress Over Time
- Disseminate Findings

The toolkit will serve as an evidence-based guide to help hospitals introduce optimal malnutrition care, while remaining flexible enough to be adapted to the unique features of different hospital settings

Implementation of the Toolkit Will be Assessed Using a Set of Quality Indicators (1 of 2)

Malnutrition Care Workflow

Screening

- Length of time between hospital admission and completion of a malnutrition screening
- Percentage of patients admitted to hospital who received a malnutrition screening within 24 hours

Assessment

- Length of time between completion of a positive malnutrition screening and a completed malnutrition assessment
- Length of time between admission and a completed malnutrition assessment for patients with a positive malnutrition screening
- Percentage of patients with a positive malnutrition screening who also had a completed malnutrition assessment

Diagnosis

- Percentage of patients with a positive malnutrition assessment who have a malnutrition-related diagnosis documented in the medical

Implementation of the Toolkit Will be Assessed Using a Set of Quality Indicators (2 of 2)

Malnutrition Care Workflow

Patient-Driven Treatment Plan

- Percentage of patients with a completed malnutrition assessment or a malnutrition-related diagnosis of at-risk or malnourished who have a documented malnutrition treatment plan in the medical record

Intervention

- Percentage of patients with a malnutrition diagnosis who had a nutrition intervention implemented
- Percentage of patients with a positive malnutrition screening who had a diet order implemented within 24 hours of the completed screening
- Length of time between admission and implementation of a nutrition intervention for patients diagnosed as malnourished or at-risk.

Discharge Planning

- Percentage of patients with a positive malnutrition assessment who have a malnutrition treatment plan included as part of their post-discharge continuing care plan

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The MQII Could Provide the Foundation for CHA's Efforts to Support Expanded Populations

Current MQII Approach		Potential Expanded Opportunities for the DHLF
Older adults (65+) / Medicare population		• Duals population • Patients with high risk/chronic conditions: diabetes, COPD, cardiovascular, oncology, GI
Acute care settings		• Acute care settings (i.e., hospitals) • Long-term and post-acute care settings • Departments; Surgery, ED, ICU
In-hospital Care		• In-hospital care • Transitions to other care settings • Preventive care

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CHIP: Children's Health Insurance Program; COPD: Chronic obstructive pulmonary disease; GI: Gastrointestinal; ED: Emergency Department; ICU: Intensive Care Unit

APPENDIX: Additional Resources

Recent Publications

- *"Critical Role of Nutrition in Improving Quality of Care: An Interdisciplinary Call to Action to Address Adult Hospital Malnutrition"* Tappenden et al., Journal of Parenteral and Enteral Nutrition 2013, 37: 482.
- "*Measuring the Quality of Malnutrition Care In the Hospitalized Elderly Patient"* Avalere, May 2014. Available at http://avalere.com/expertise/life-sciences/insights/dialogue-proceedings-measuring-the-quality-of-malnutrition-care.
- *"Malnutrition Diagnoses in Hospitalized Patients: United States, 2010"* Corkins et al., Journal of Parenteral and Enteral Nutrition, 2014, 38: 186.
- *"Nutrition Screening and Assessment in Hospitalized Patients: A Survey of Current Practice in the United States"* Patel et al., Nutrition Clinical Practice, Online July 2, 2014.
- *"Economic Burden of Community-Based Disease-Associated Malnutrition in the United States",* Snider et al, Journal of Parenteral and Enteral Nutrition Supplement, November 2014.
- *"Launching the Malnutrition Quality Improvement Initiative"* Avalere, November 2014. Available at http://avalere.com/expertise/life-sciences/insights/dialogue-proceedings-launching-the-malnutrition-quality-improvement-initiat.
- *"Can Oral Nutritional Supplements Improve Medicare Patient Outcomes in the Hospital?"* Lakdawalla et al., Forum for Health Economics and Policy, November 2014.
- *"Malnutrition Among Cognitively Intact, Noncritically Ill Older Adults in the Emergency Department"* Pereira et al., Annals of Emergency Medicine, January 2015, Volume 65, Issue 1.
- *"Effect of hospital use of oral nutritional supplementation on length of stay, hospital cost, and 30-day readmissions among Medicare patients with COPD"* Snider et al., CHEST, Online October 2014.