HIMSS17

Transforming Malnutrition Care with Electronic Clinical Quality Measures (eCQMs) Forum

Proceedings Summary from February 22, 2017

Hosted by

Support provided by a medical education grant from Abbott Nutrition

HIMSS17 marks the seventh year for non-profit partnership between HIMSS and the Academy of Nutrition and Dietetics, and fourth year as an endorser.

We appreciate the continued opportunity for improving nutrition care via health IT.

Foreword

Malnutrition is defined as a state of deficit, excess, or imbalance in protein, energy or other nutrients that adversely impacts an individual's own body form, function, and clinical outcomes.

Malnutrition is an independent predictor of negative patient outcomes including mortality, length of hospital stay, preventable readmissions and hospitalization costs. Despite evidence that demonstrates the benefits of nutrition for healing, recovery and chronic disease management, significant variation and gaps remain in care processes that can negatively impact time to screening, assessment, diagnosis, intervention and monitoring across the care continuum. Research suggests that 20-50% of hospitalized adults are at-risk or malnourished and yet on average only 7% are diagnosed with malnutrition by the time they are discharged.

The gap occurs for a number of reasons, including a lack of systematic tracking of nutrition care and malnutrition in electronic health record (EHR) systems.

MALNUTRITION QUALITY IMPROVEMENT INITIATIVE

To address this problem, Avalere Health and the Academy of Nutrition and Dietetics (Academy) established the Malnutrition Quality Improvement Initiative (MQii). One of the objectives of this initiative was to create a set of malnutrition-focused electronic clinical quality measures (eCQMs) to support optimal nutrition care for malnourished and at-risk older adults.

The MQii is a multi-year effort that began in 2013 when a variety of stakeholder organizations began to highlight gaps in existing malnutrition care and the impact of these gaps on patient outcomes. Based on the results of subsequent literature reviews, landscape assessments, engagements with key stakeholders, and best practices research, the MQii was established in partnership with the Academy, Avalere Health, and other stakeholders providing guidance through key technical expert and advisory roles. The engagement was undertaken to advance evidence-based, high-quality, patient-centered care for hospitalized older adults (age 65 years and older) who are malnourished or at-risk for malnutrition.

As a result of the initiative, a set of four malnutrition-focused eCQMs and a companion best practices resource toolkit were developed and tested for use in the hospital setting. Support provided by Abbott. Please visit www.MQii.today for access to these free resources.

Proceedings Summary

TRANSFORMING MALNUTRITION CARE WITH ELECTRONIC CLINICAL QUALITY MEASURES (ECQMS) FORUM

The Transforming Malnutrition Care with Electronic Clinical Quality Measures (eCQMs) Forum was hosted at the HIMSS17 Conference in Orlando, Florida on February 22, 2017 by the Academy of Nutrition and Dietetics, a non-profit partner and endorser of HIMSS, and Avalere Health. See Appendix A for Forum Agenda.

This Forum convened public and private sector organizations to share the latest evidence, experiences, and lessons learned on new applications and approaches on using eCQMs in malnutrition care.

Invited guests included physician and non-physician providers, health information technology industry representatives, patient advocacy leaders, government and other organizational thought leaders, acute-care hospital leaders, professional societies and research organizations. Participants provided observations and insights concerning the Forum objectives outlined below.

OBJECTIVES

- Creation of a shared vision for malnutrition care using eCQMs
- Identification of enablers and barriers to malnutrition eCQM implementation
- Reflection on key lessons learned from the University of Iowa
- Promotion of a shared action plan for the implementation of malnutrition eCQMs

FORUM PANELISTS

- Moderator: Chris Boone, PhD, MHA, FACHE, Vice President, Avalere Health
- Keynote: Kevin Larsen, MD, FACP, Center for Medicare and Medicaid Innovation
- Lindsey Hoggle, MS, RD, PMP, Director Nutrition Informatics, Academy of Nutrition and Dietetics
- Ken Nepple, MD, FACS, Assistant CMIO, Physician Value Officer at University of Iowa Health Care
- Angel Valladares, MPH, Manager Evidence Translation & Implementation, Avalere Health

CALL TO ACTION FOR THE "SKELETON IN THE HOSPITAL CLOSET"

A related blog, *Call to Action for the "Skeleton In the Hospital Closet"* was posted one day prior to the forum on the HIMSS17 website http://www.himssconference.org/updates/call-action-skeleton-hospital-closet. See Appendix C.

Forum Panelists Remarks

KEYNOTE: THE FUTURE OF A VALUE-DRIVEN SYSTEM

Kevin Larsen, MD, FACP
Center for Medicare & Medicaid Innovation (CMMI)
Office of the Administrator-CMS

The CMS CMMI tests models that improve care, lower costs, and better align payment systems to support patient-centered practices. They "test the theory of change" and evaluate innovative reform efforts widely used in the private sector to determine which ones should be included in the CMS program. There are a number of innovative CMMI and private sector value-driven models emerging:

- **Comprehensive Care for Joint Replacement:** Tests bundled payment and quality measurement for an episode of care associated with hip and knee replacements from the initial hospitalization through recovery
- **Million Hearts Model:** Provides targeted incentives for health care practitioners to identify high-risk cardiovascular disease beneficiaries and reduce risk
- **Intel:** Self-insured private payer is advancing healthcare interoperability by requiring hospitals to demonstrate info shared across hospital and outpatient settings
- **Virginia Mason Hospital:** Offers a warranty, guaranteed price and outcomes on Hip and Knee Replacement and Back Surgeries
- **Employers Centers of Excellence Network:** Hospitals provide predictable-cost procedures for employees of several large companies, including Walmart
- **Vermont Blueprint for Health:** Many states are establishing their own health care priorities, quality measurement and quality reporting programs.

Quality measurement is often viewed as a summative or year-end activity. With eCQMs, data is available in real-time, collected as low-burden, part of usual care and usual work, but individual providers and those in charge of managing population health can have visibility to things they did not previously have visibility to and take action immediately.

HOW CAN WE COLLABORATE TO INCLUDE NUTRITION IN ALL HEALTH IT STANDARDS AND CARE PLANS?

Lindsey Hoggle, MS, RD, PMP
Director of Nutrition Informatics
Academy of Nutrition and Dietetics

Malnutrition is a significant problem across all care settings, especially for older adults. Nutrition and timely nutrition intervention is vital to a patient's recovery and healing. It is vital that nutrition content follows a patient; however, all too often nutrition is overlooked as a medical intervention and left out of Health IT standards and a patient's care plan.

Members of the Academy have been actively engaged for several years with multiple partners to include nutrition in Health IT and Quality standards. The Academy has

- Mapped the electronic Nutrition Care Process Terminology (eNCPT) to SNOMED-CT and LOINC®
- Partnered with HIMSS, HL7, the Office of the National Coordinator and others to develop nutrition content in health IT standards, advocate for nutrition inclusion in Certified Health IT and conduct proof of concept and interoperability testing of nutrition standards
- Developed nutrition content representing the Nutrition Care Process in seven different Transitions of Care document templates of the HL7 Consolidated Clinical Document Architecture R2.1
- Developed and tested, in collaboration with Avalere Health, a set of four facility-level de novo malnutrition eCQMs that are now ready for implementation and under consideration by CMS for the Hospital Inpatient Quality Reporting Program

The Academy, a non-profit partner and endorser of HIMSS, convened this Forum at HIMSS17 to engage Health IT leaders (informaticists, electronic health record vendors, clinicians, CMS and others) to explore opportunities and barriers to "transform malnutrition care with eCQMs". See Appendix B for a description of the four malnutrition eCQMs. For more information and to download the measures specification manual go to www.eatrightPro.org/emeasures

MAKING IT WORK AT THE UNIVERSITY OF IOWA

Ken Nepple, MD, FACS
Assistant CMIO, Physician Value Officer
University of Iowa Health Care

Malnutrition is grossly under-recognized in clinical practice. As nutrition is not comprehensively taught in medical school, most physicians are not aware of malnutrition screening, assessment, diagnosis and treatment guidelines. Additionally, dietitians are often under-utilized and frequently consulted only after a patient is experiencing poor outcomes. With malnutrition we need to address risk identification and risk reduction but we first have to measure before we get can assess outcomes.

The University of Iowa Health Care system has been actively engaging in malnutrition care quality improvement for several years. We integrated a validated malnutrition screening tool into our EHR and conducted a project to redefine our malnutrition assessment process by transferring the assessment to discreet data in the EHR. The effort focused on redesigning malnutrition care delivery throughout the inpatient setting. With a focused workflow our rate of malnutrition identification improved the identification of malnutrition. We also participated as a test site for the malnutrition eCQMs. We now have an analytic report that allows both retrospective evaluation of malnutrition and real-time visibility to identify patients screened positive for malnutrition but who may not have received an assessment and/or a physician diagnosis in the EHR. As a result of our focused workflow pilot we were able to expand our inpatient dietitian workforce by over 25% and expand coverage to our outpatient cancer center.

TRANSFORMING MALNUTRITION CARE WITH ECQMS

Angel Valladares, MPH
Manager, Evidence Translation & Implementation
Avalere Health

Research suggests that 20-50% of hospitalized adults are at-risk or malnourished and yet on average only 7% are diagnosed with malnutrition by the time they are discharged. The gap occurs for a number of reasons: including a lack of systematic tracking of nutrition care and malnutrition in EHR systems.

In response to these gaps, Avalere Health and the Academy joined forces with a diverse set of stakeholders to design and implement the Malnutrition Quality Improvement Initiative (MQii) which aims to advance evidence-based, high-quality, patient-driven care for hospitalized older adults who are malnourished or at-risk for malnutrition. Our group of stakeholders identified that despite the evidence, gaps remain in care processes that can negatively impact nutrition care across the care continuum.

As a result, a dual-pronged approach was designed to provide a set of best practices (MQii toolkit) spanning all the available evidence to enable hospitals to achieve quality improvement, and also to develop a set of malnutrition eCQMs to facilitate monitoring of performance against the key standards of care. The four eCQMs are designed to work with the EHR and allow for more automatized data collection, thus helping providers to more quickly identify areas of improvement and focus on what they do best, providing evidence-based care that is high quality.

Both the MQii toolkit and eCQMs were tested for feasibility and use and eCQMs are ready for implementation in EHRs right now. Use of these can mean better value in healthcare for patients, hospitals and Medicare especially during a time of major change as was described by Dr. Larsen.

In 2017 the Academy and Avalere Health are expanding the initial Learning Collaborative to have a national reach and are aiming to touch a representative share of regions around the country. The MQii Learning Collaborative 2.0 will bring together leading healthcare delivery and quality-focused organizations across the U.S. to demonstrate the scalability of this approach, how the benefits of addressing malnutrition care can be seen regardless of geographic region or patient population, and to accelerate the dissemination of optimal malnutrition care practices with the eCQMs and the MQii toolkit. Go to www.mqii.today to take the MQii Readiness Questionnaire and for more information on the eCQMs and the toolkit.

Forum Discussion Summary

OBJECTIVE/TOPIC	DISCUSSIONS/RECOMMENDATIONS
Articulating the vision for the use of eCQMs in malnutrition care	• Acute care measures are selected by the hospital; input to decisions are critical. • Screening for malnutrition seems to be a critical first step for acute care settings. • However, it's not just enough to screen patients, but screen them *appropriately* with a validated screening tool • Value based care built upon improved outcomes is the new norm.
Identify enablers and barriers to achieving a shared vision of malnutrition management	• Would be helpful to have specific nutrition screening tools embedded in EHRs for implementers. • Present EHR systems need additional work for malnutrition measurement as nutrition care functionality is inconsistent. – Properly designed systems that support the health IT standards and eCQMs are needed. For example, the collection of care plan data can be challenging since so many EHR care plans are free text at this time. • Awareness of malnutrition and its impact on health is a key enabler; message must continue. • Identification and access to structured clinical data is critical to successfully implementing the measures.
Highlight the lessons learned from the University of Iowa pilot of malnutrition eCQMs	• Magnitude of malnutrition is significant in outcomes • Physician discussions with upper management decision makers is necessary, inter-disciplinary teams to tackle malnutrition is critical for risk identification and risk reduction. • Once screening identifies patients at risk, staff must be available for the assessment and follow-up.
Promote a shared action plan for expanding the usage of malnutrition eCQMs	• Malnutrition eCQMs fall nicely into the Learning Health System. • Learning Collaborative 2.0 is still open for additional sites and participants to engage in implementation of malnutrition eCQMs.

Call to Action

- **Malnutrition is a significant problem: and we have a gap:** Across all care settings and especially with older adults
- **Malnutrition eCQMs for hospitalized older adults are ready for implementation:** Go to www.mqii.today or www.eatrightPRO.org/emeasures
- **Nutrition content needs to follow patients wherever they go:** Include nutrition/malnutrition documentation (using coded terminology) in every foundation system and "plug and play" modules that are easy to adopt
- **All hands on deck are needed:** Help us continue the conversation! Review this with your organization and share with your network!

Contact us if you are interested in advancing malnutrition eCQMs
malnutritionquality@avalere.com

SOCIAL MEDIA

Malnutrition hashtags (#Malnutrition and #MalnutritionHIMSS17) and HIMSS17 hashtags (#Quality #Health IT #Care Coordination #PopHealth #Clinical Informatics #Clinical Engagement #Patient Safety Outcomes #HIMSS17) were used for social media reporting prior to and during the forum.

CONTINUE THE CONVERSATION

#Malnutrition
#HIMSS17

LinkedIn

Twitter

Facebook

Appendix A: Malnutrition eCQM Forum Agenda

HIMSS17 Transforming Malnutrition Care with eCQMs Forum

Wednesday, February 22, 2017, 12:00 p.m. – 1:30 p.m.

TIME	TOPIC	PRESENTERS
12:00 p.m.	**Welcome & Opening Remarks**	**Chris Boone, PhD, MHA, FACHE,** *Vice President, Avalere Health* **Lindsey Hoggle, MS, RD, PMP** *Director of Nutrition Informatics,* *Academy of Nutrition and Dietetics*
12:10 p.m.	**KEYNOTE: The Future of a Value-Driven System**	**Kevin Larsen, MD, FACP** *Center for Medicare and Medicaid (CMS) Innovation (CMMI)* *Office of the Administrator- CMS*
12:25 p.m.	**Making it Work at the University of Iowa**	**Ken Nepple, MD, FACS** *Assistant CMIO, Physician Value Officer,* *University of Iowa Health Care*
12:45	**Transforming Malnutrition Care with eCQMs**	**Angel Valladares MPH** *Manager, Evidence & Translation* *Avalere Health*
1:05 p.m.	**PANEL DISCUSSION: Malnutrition eCQMs:**	**Chris Boone, PhD, MHA, FACHE** **Kevin Larsen, MD, FACP** **Ken Nepple, MD, FACS** **Angel Valladares, MPH**
1:25 p.m.	**Closing Remarks & Call to Action** *Malnutrition eCQM Forum Proceedings* *Identification of enablers and barriers* *Shared Action Plan* *Launch of expanded Malnutrition Learning Collaborative*	**Chris Boone, PhD, MHA, FACHE,** **Lindsey Hoggle, MS, RD, PMP**
1:30 p.m.	**Meeting Adjourns**	

Appendix B: Four Malnutrition eCQMs[1]

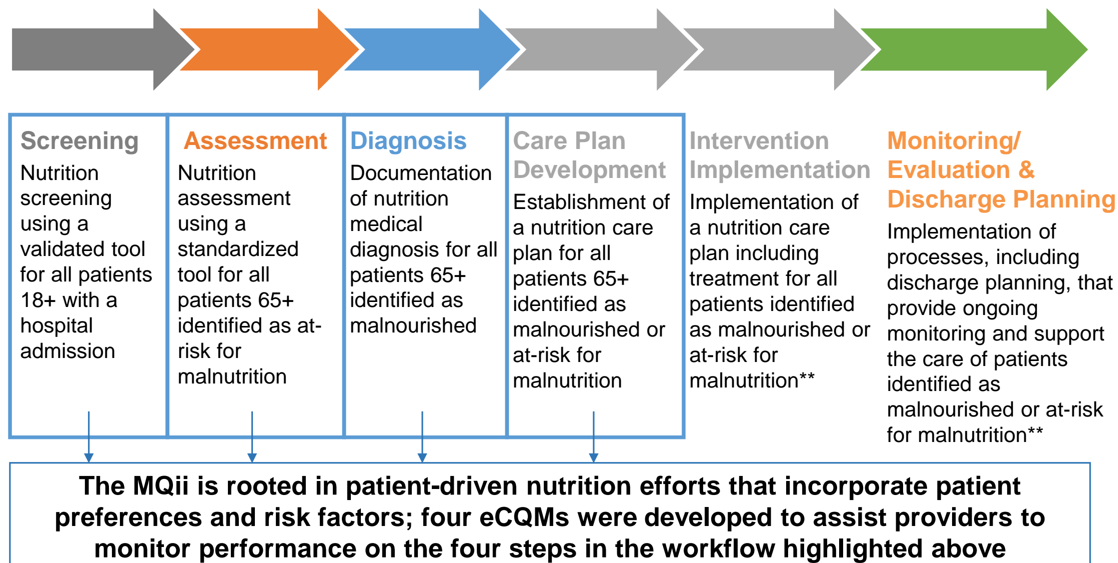
Completion of a Malnutrition Screening within 24 hours of Admission	Patients in the denominator who have a completed malnutrition screening documented in the medical record within 24 hours of admission to the hospital
	All patients age 18 years and older at time of admission who are admitted to an inpatient hospital

Completion of a Nutrition Assessment for Patients Identified as At-Risk for Malnutrition w/in 24hrs of a Malnutrition Screening	Patients in the denominator who have a nutrition assessment documented in the medical record within 24 hours of the most recent malnutrition screening
	Patients who were identified as at-risk for malnutrition upon completing a malnutrition screening

Nutrition Care Plan for Patients Identified as Malnourished after a Completed Nutrition Assessment	Patients with a nutrition care plan documented in the patient's medical record
	Patients age 65 years and older admitted to inpatient care who have a completed nutrition assessment with findings of malnutrition documented in their medical record

Appropriate Documentation of a Malnutrition Diagnosis for Patients	Patients with a documented diagnosis of malnutrition
	Patients age 65 years and older admitted to inpatient care who have a completed nutrition assessment with findings of malnutrition documented in their medical record

eCQMs Align with Recommended Malnutrition Care Workflow



**Measures for intervention implementation, monitoring/evaluation, and discharge planning were not technically feasible due to limitations in the availability of measure data.

[1] The Academy of Nutrition and Dietetics is the Measure Steward for the malnutrition eCQMs and Avalere Health is the Measure Developer.

Appendix C: HIMSS17 Blog

Call to Action for the "Skeleton in the Hospital Closet"

http://www.himssconference.org/updates/call-action-skeleton-hospital-closet

by: Lindsey Hoggle, director, nutrition Informatics, Academy of Nutrition and Dietetic

As a student completing dietetics training (in the late 1970s) in a large, academic teaching hospital on how best to support critically ill patients, there was a heavy cloud that hung over many of the patients I saw. Those clouds arose from a landmark article "The Skeleton in the Hospital Closet," which was published in 1974 by Charles E. Butterworth, Jr., MD. It exposed the paradox of "physician-induced malnutrition as one of the most serious nutritional problems of our time." This article was a tipping point for building an awareness of chronic disease-induced and injury-induced malnutrition in the U.S.

Dr. Butterworth lamented that it was indeed strange as to:

> "…how frequently one sees the hospital stay prolonged and the patients suffering made worse by what we now recognize as frank mismanagement, if not downright neglect, of the patients nutritional health in our hospitals."

This was a severe proclamation – particularly at a time that pre-dated extreme comments, which are now a part of our daily communication.

The landscape was much different during this time; the internet did not exist and would not surface for another 15 years after this shocking article. Social media was non-existent, e-mail was a new concept, and no e-mail lists were available to share proof of such research. Researching articles on malnutrition required a physical trip to the medical library, researching topics and locating references in a filing CardEx, then manually making copies on a copying machine that barely captured the full text of huge bound medical journals held in place while depositing nickels in the slot for copies.

I still remember my disbelief that malnutrition could be hiding in plain sight – until I experienced it from the standpoint of a registered dietitian nutritionist (RDN) charged with the nutrition care of patients. I was fortunate to work in some very progressive team-based academic teaching facilities – who were open to the need for nutritional support. After all, total parenteral nutrition (intravenous support of all necessary nutrients, typically bypassing the gut) had been a term developed in the 1960s. Nutrition Support Teams composed of physicians, nurses, pharmacists and nutritionists managed critical patients who could be sustained by increased oral nutrition supplements, enteral feedings and parenteral nutrition. Hospitals adhered to Joint Commission screening requirements – that patients be screened within 24 hours of admission and those identified at risk –assessed by an RDN. Heavy patient loads for

RDNs precluded the lofty goal of creating nutrition interventions for every patient who needed it. Even with increased options for nutrition care, I often felt incapable of making the difference I hoped in the lives of many very sick patients.

Fast forward 40+ years - to 2017. Today we not only have an "Internet" but we are impatient when it does not instantaneously respond to our needs. E-mail, text-messaging, smart phones and all things digital – are a normal part of our personal and professional existence. We are on the cusp of near universal EHR use in non-federal U.S. hospitals. Digital access to medical research is at the tips of our fingers and innovative efforts to dissolve the silos of personal health information is upon us. Collaboration of public-private-government projects to force "consumer centric" care is encouraging.

So what happened to the skeleton? It is still there- however collaborative efforts through the Academy of Nutrition and Dietetics have generated a powerful new call to action on malnutrition. One aspect of this effort includes patients and caregivers (patient advocates) and addresses documentation via four Malnutrition electronic Clinical Quality Measures. What does this mean?

- Successful malnutrition intervention and care is possible, given patient-centered care. The management of malnutrition ripples across all care settings and should be a foundation of a Learning Health System.
- A wonderful tipping point is upon us-- to address the burden of malnutrition in hospitalized patients. The team includes us all – Malnutrition basic knowledge is critical to making a difference in malnutrition.

This report was developed by the Academy of Nutrition and Dietetics and Avalere Health (an Inovalon Company)

ACADEMY OF NUTRITION AND DIETETICS

The Academy is the world's largest organization of food and nutrition professionals. The Academy is committed to improving health and advancing the profession of dietetics through research, education and advocacy. Founded as the American Dietetic Association in Cleveland, Ohio, in 1917, a group of women collaborated to aid the government conserve food and improve the public's health and nutrition during World War I. After 95 years, the association changed its name in January 2012 to the Academy of Nutrition and Dietetics — complementing the focus of the organization to improve nutritional well-being, communicating the expertise of its members who are a part of a food- and science-based profession.

AVALERE HEALTH

Avalere Health is a strategic advisory company whose core purpose is to create innovative solutions to complex healthcare problems. Based in Washington, D.C., Avalere delivers actionable insights, business intelligence tools, and custom analytics for leaders in healthcare business and policy.