



MALNUTRITION QUALITY
IMPROVEMENT INITIATIVE

Introduction to the Malnutrition Quality Improvement Initiative (MQii)

The Malnutrition Quality Improvement Initiative (MQii) is a project of the Academy of Nutrition and Dietetics, Avalere Health, and other stakeholders who provided guidance and expertise through a collaborative partnership. Support provided by Abbott.

Overview

- The Case for Malnutrition Quality Improvement
- Background on the Malnutrition Quality Improvement Initiative (MQii)
- The MQii Learning Collaborative: Toolkit and eCQM Testing and Implementation



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The Case for Malnutrition Quality Improvement

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Malnutrition Is a Highly Prevalent Condition

Affects 20-50% of patients, who are at risk of becoming or are malnourished upon hospital admission^{1,2}



Is typically diagnosed in only 7% of hospitalized patients, leaving many potentially undiagnosed and untreated³



Up to 31% of malnourished patients and 38% of well-nourished patients experience nutritional decline during their hospital stay⁴



1. Barker LA, Gout BS, and Crowe TC. Hospital malnutrition: prevalence, identification, and impact on patients and the healthcare system. Int J Environ Res and Public Health. 2011;8:514-527.
2. Pereira GF, Bulik CM, Weaver MA, Holland WC, Platts-mills TF. Malnutrition among cognitively intact, noncritically ill older adults in the emergency department. Ann Emerg Med. 2015;65(1):85-91.
3. Weiss AJ, Fingar KR, Barrett ML, Elixhauser A, Steiner CA, Guenter P, Brown MH. Characteristics of hospital stays involving malnutrition, 2013. HCUP Statistical Brief #210. September 2016. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb210-Malnutrition-Hospital-Stays-2013.pdf>.
4. 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 (11): 1316-1322.

Malnutrition Poses a Significant Burden to Patients and Hospitals

Associated with an **up to 5x** higher likelihood of in-hospital death compared to non-malnourished patients¹

Associated with a **54% higher** likelihood of 30-day readmissions, with **septicemia** as the leading diagnosis upon readmission³

Creates greater risk of hospital-acquired **infections, falls, pressure ulcers, and slower wound healing**²

More than doubles average hospital costs per stay,¹ with readmissions costing **26-34% higher** than those for patients without malnutrition³

Malnutrition Contributes to High Healthcare Costs

\$157 Billion

Morbidity, mortality, and direct medical costs associated with disease-related malnutrition

\$51.3 Billion

Annual costs of disease-associated malnutrition attributable to older adult patients

Addressing Malnutrition Can Improve Patient Outcomes and Lower Costs

RECENT STUDIES DEMONSTRATE THAT PROVIDING OPTIMAL MALNUTRITION CARE IS ASSOCIATED WITH IMPROVED OUTCOMES



Optimizing malnutrition care in an Accountable Care Organization (ACO) with multiple hospitals reduced readmission rates by 27%¹



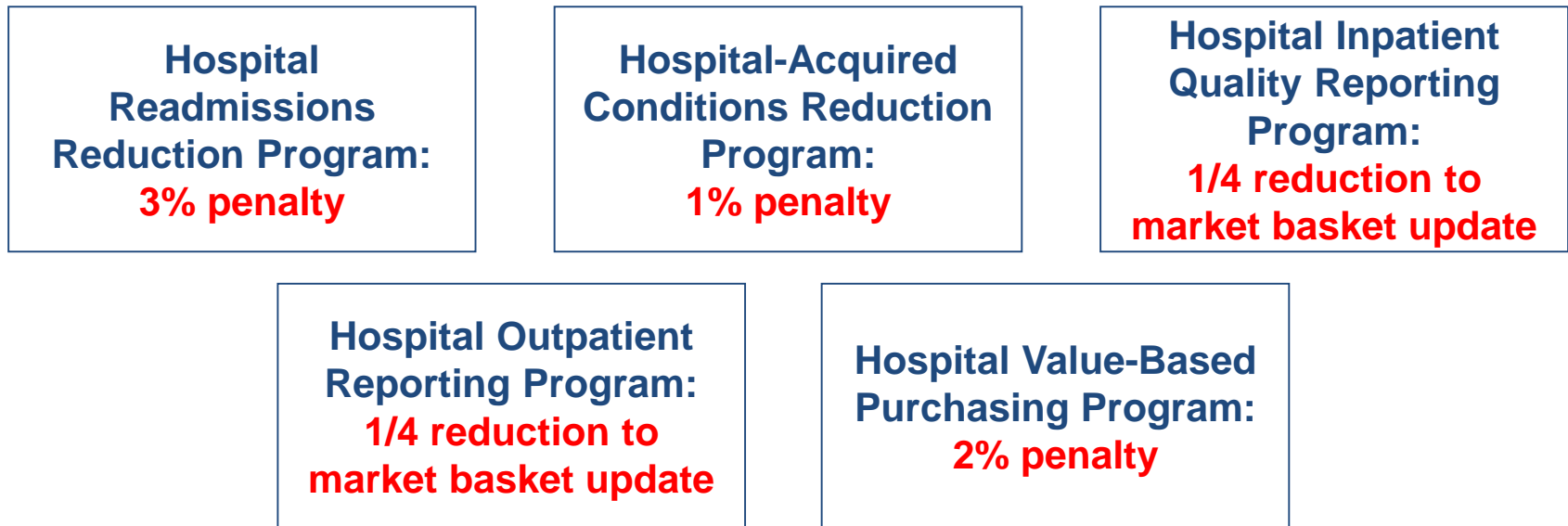
Supporting early nutritional care can reduce pressure ulcer incidence, length of stay, 30-day readmissions, and costs of care²



Implementation of a nutrition-focused quality improvement program resulted in over \$4.8M in cost savings across four hospitals³

Quality Malnutrition Care Can Help Hospitals Achieve National Quality Requirements

Optimal malnutrition care reduces adverse patient outcomes for which hospitals increasingly face penalties from the Centers for Medicare & Medicaid Services (CMS):



Private payers have established similar efforts to incentivize better care and outcomes.



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Background on the MQii

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What is the MQii?

The Malnutrition Quality Improvement Initiative (MQii) is a project of the **Academy of Nutrition and Dietetics, Avalere Health, and other stakeholders** who provided expert input through a collaborative partnership.

This initiative aims to advance evidence-based, high-quality and patient-driven care for hospitalized older adults who are malnourished or at-risk for malnutrition.

Overview of MQii Implementation:

2013-2014

Gap Analysis

2015

Program Design

2016

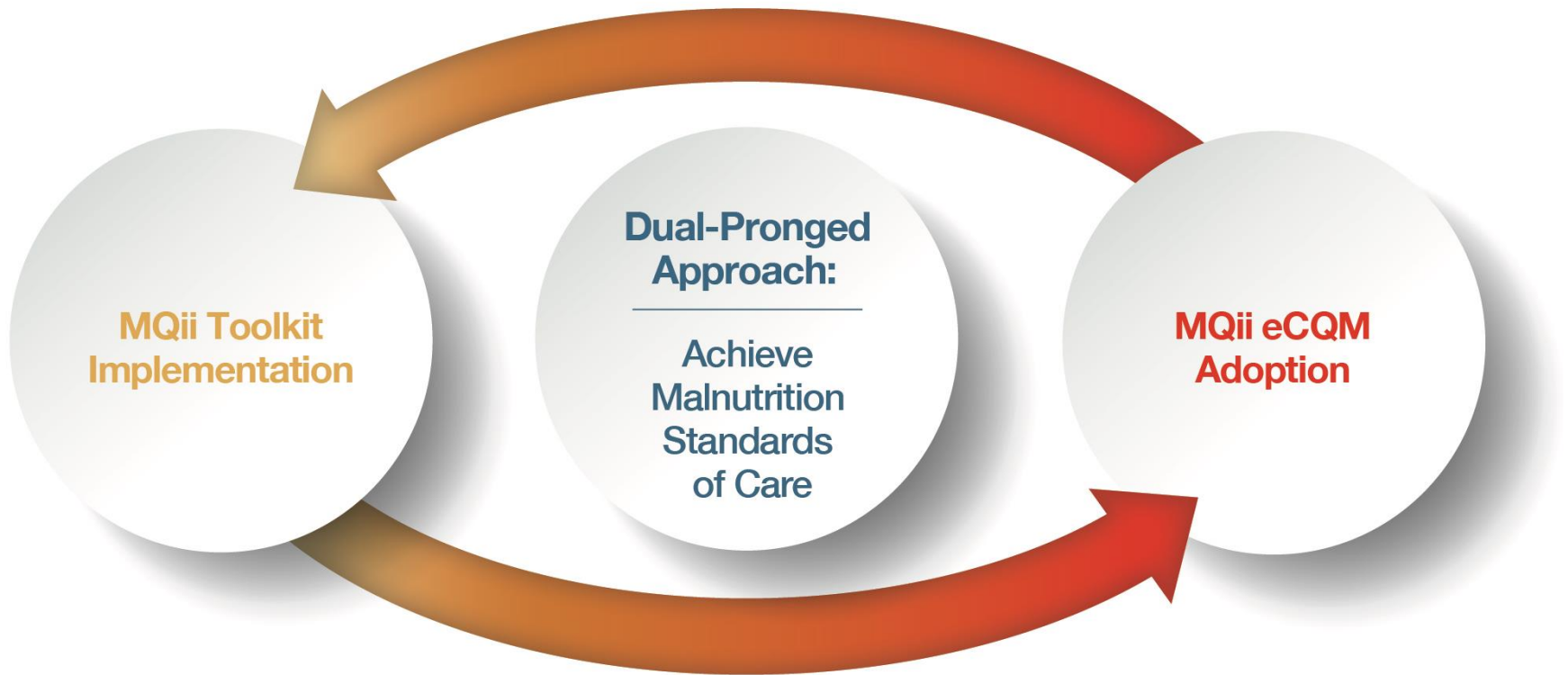
Pilot Testing

2017 and beyond

Expansion & Spread

The MQii Provides a Dual-Pronged Approach to Achieve Malnutrition Standards of Care

The MQii Toolkit provides practical resources to enable hospitals to achieve optimal nutrition standards of care



Data reported from eCQMs will help hospitals demonstrate their success in meeting optimal malnutrition standards of care



Both tools are available for public use free of charge at: <http://www.MQii.Today>

The Toolkit Offers Start-to-Finish Guidance for Your Entire Interdisciplinary Care Team

USE OF THE TOOLKIT WILL HELP YOU IDENTIFY AND ADDRESS OPPORTUNITIES FOR QUALITY IMPROVEMENT

- Includes implementation resources:
 - Soliciting leadership buy-in
 - Identifying a quality improvement project based on your hospital's existing care practices
 - Understanding best practices for optimal malnutrition care
 - Using tools to support education and training
 - Tracking changes in care with data management information
- May potentially improve patient and economic outcomes of interest, such as readmissions and length of stay

Toolkit Components:

The Importance of Malnutrition Care

Assess Your Readiness

Identify Malnutrition QI Opportunities

Access the Toolkit

- **Training Materials**
- **Clinical Workflow**
- **Best Practice Recommendations**
- **Data Collection Tools**

Appendix: Principles and Models of Quality Improvement

MQii Tools Reflect Best Practices across the Malnutrition Care Continuum

MQii TOOLKIT AND eCQMs SPAN THE MALNUTRITION CARE WORKFLOW



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

<ul style="list-style-type: none"> Nurse 	<ul style="list-style-type: none"> Dietitian 	<ul style="list-style-type: none"> Physician Dietitian 	<ul style="list-style-type: none"> Physician Dietitian Nurse 	<ul style="list-style-type: none"> Physician Dietitian Nurse 	<ul style="list-style-type: none"> Physician Dietitian Nurse
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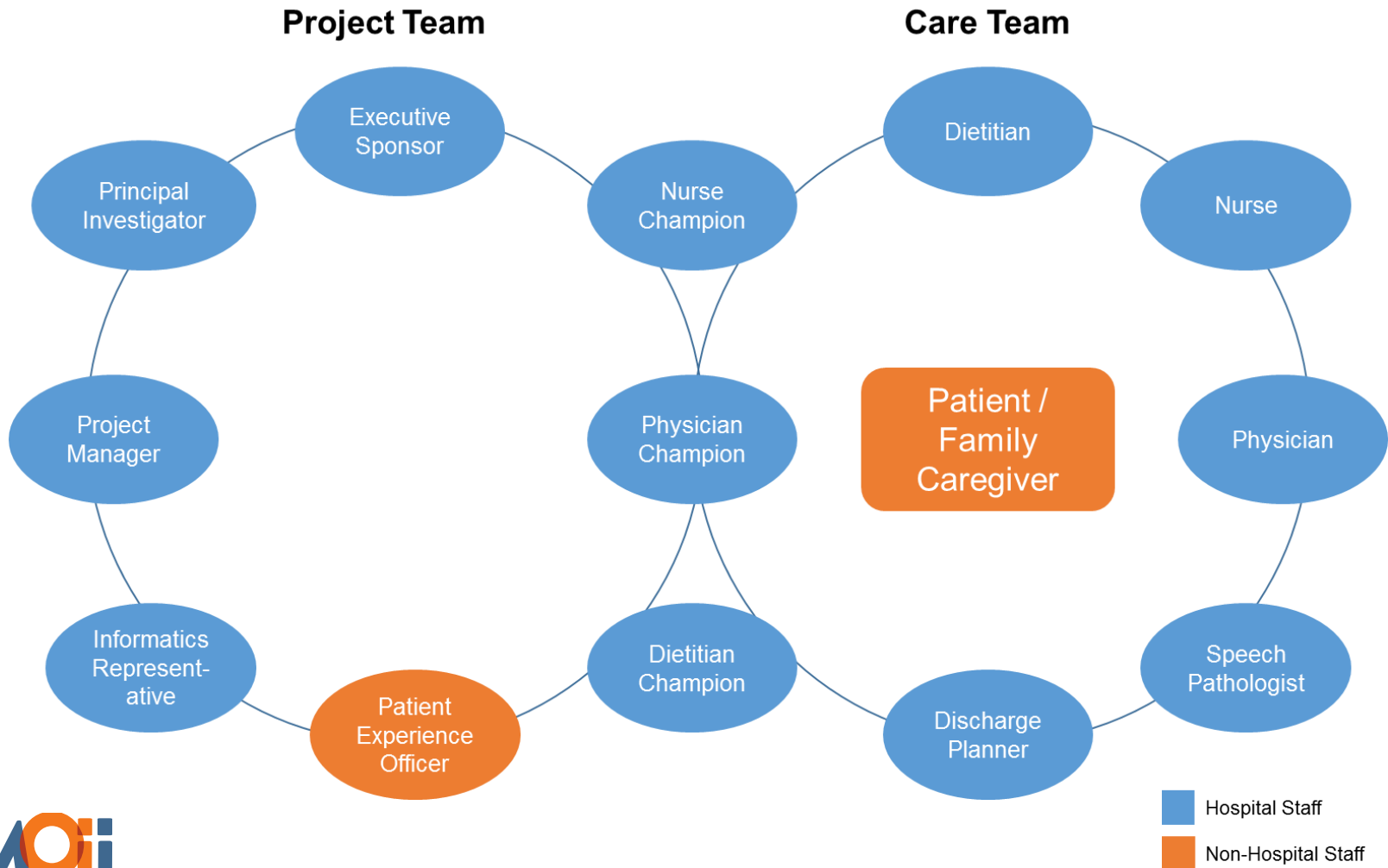


 = Measure developed to address this step in the malnutrition care workflow

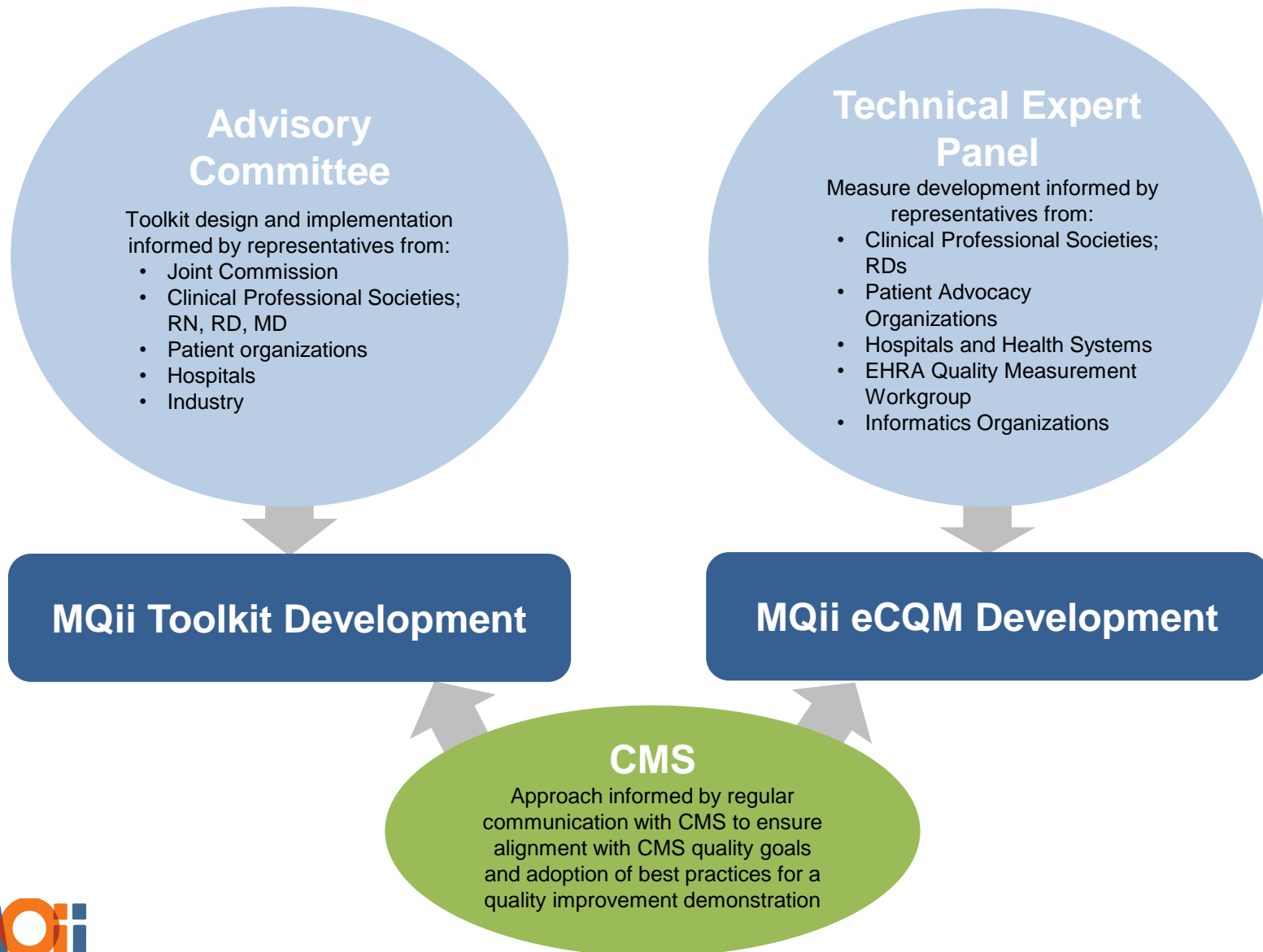
*Measures for monitoring and evaluation, and discharge planning were not technically feasible due to limitations in availability of measure data.

MQii Supports Establishment of Interdisciplinary Teams to Address Malnutrition Care Gaps

AN INTERDISCIPLINARY TEAM, WITH PARTICIPATION BY PHYSICIANS, NURSES, AND DIETITIANS, IS VITAL TO HOSPITAL-BASED MALNUTRITION QUALITY IMPROVEMENT



Both Components of the Initiative are Grounded in Multi-Stakeholder Support





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The MQii Learning Collaborative: Toolkit and eCQM Testing and Implementation

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Early Testing Results for the eCQMs and the Toolkit Were Positive

In 2016, a small MQii Learning Collaborative tested the eCQMs and Toolkit to assess their ability to be used in the clinical setting and their impact on care delivery; results demonstrated that there is wide variation in standard practices of malnutrition care, but targeted quality improvement efforts can affect change

eCQM Field Testing Results		
Measure Tested	Hospital 1	Hospital 2
	Performance Results (numerator/denominator and %-score)	
Screening (eCQM #1)	1949/2756 (70.7%)	1218/1713 (71.1%)
Assessment (eCQM #2)	98/346 (28.3%)	55/114 (48.3%)
Care Plan (eCQM #3)	27/32** (84.4%)	183/186 (98.4%)
Diagnosis (eCQM #4)	18/32** (56.3%)	55/186 (29.6%)

MQii Toolkit Testing Results	
Hospital 3	
Primary Outcome	Results
Malnutrition knowledge in a multi-disciplinary care team following the Toolkit demonstration	14% increase from baseline
Provider medical diagnosis of malnutrition when there was a dietitian diagnosis of malnutrition	11.5% increase from baseline

Exploratory analysis of malnutrition quality improvement projects' impacts on length-of-stay and 30-day readmissions also showed positive results



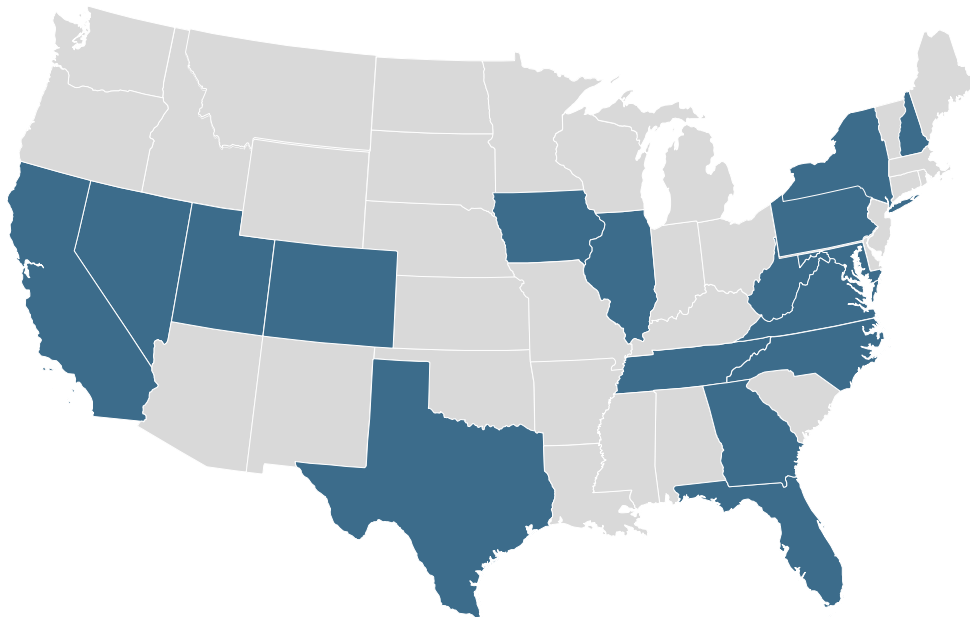
**Measure calculation is based off of a chart abstracted sample and not representative of the entire hospital's performance; the data required for full electronic report was not available in the format necessary to report a hospital-wide performance rate.

Nationwide Learning Collaborative Supports Expanded Use of MQii Toolkit and eCQMs

The MQii Learning Collaborative intends to implement MQii tools under real-world circumstances to generate evidence on malnutrition care best practices and encourage optimal malnutrition care across the U.S.

- In 2016, 6 hospitals participated in the MQii Learning Collaborative
- In 2017, 50 hospitals participated in the MQii Learning Collaborative

Distribution of Participating Sites



Participant Demographics

- **Facility Type:**
 - Short-term Acute Care: 64%
 - Academic Medical Center: 27%
 - Other: 9%
- **Size:**
 - Large: 45%
 - Medium: 33%
 - Small: 22%
- **Geographic Distribution:**
 - Urban: 87%
 - Rural: 13%
- **EHR Platforms:**
 - Epic: 67%
 - Cerner: 27%
 - Other (AllScripts, Meditech, etc.): 6%

Testimony from Participating Learning Collaborative Sites



“Everyone had the philosophy that **the MQii was best for the patient**, and was interested in being involved in a project that affected a large percentage of our population. **Each discipline brought a unique perspective** to the table.”



“By **working with members throughout the care team**, we are becoming more aware of gaps in communication and are working towards our goal of identifying malnourished patients.”



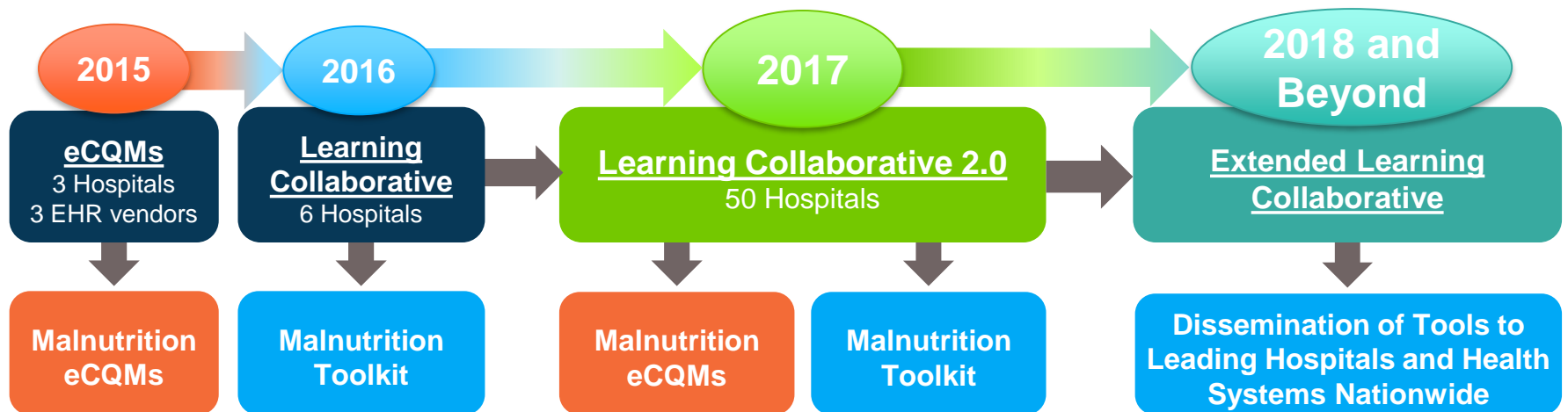
“The MQii definitely **opened the door to resources** needed to help collect data as well as put improvement plans in place, whether it be with IT, nursing, medical staff, etc.”



“It’s just the **right thing to do**, for your staff, your organization and most importantly your patients and community.”

MQii Continues to Expand to More Hospitals

The extension of the Learning Collaborative to a greater number of hospitals will continue to elevate malnutrition and disseminate use of the dual-pronged approach on a national scale



Opportunities to Engage in the MQii

If you are interested in learning more about the initiative or participating in the MQii Learning Collaborative, please contact the MQii team at malnutritionquality@avalere.com

Note: There are no fees to participate in the Learning Collaborative, and all materials will be provided free of charge

To learn more about the MQii Toolkit and eCQMs, visit www.MQii.today