



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<sup>1,2</sup>



Is typically diagnosed in only 7% of hospitalized patients, leaving many potentially undiagnosed and untreated<sup>3</sup>



Up to 31% of malnourished patients and 38% of well-nourished patients experience nutritional decline during their hospital stay<sup>4</sup>



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 patients<sup>1</sup>

Associated with a **54% higher** likelihood of 30-day readmissions, with **septicemia** as the leading diagnosis upon readmission<sup>3</sup>

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

**More than doubles** average hospital costs per stay,<sup>1</sup> with readmissions costing **26-34% higher** than those for patients without malnutrition<sup>3</sup>

# 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%<sup>1</sup>



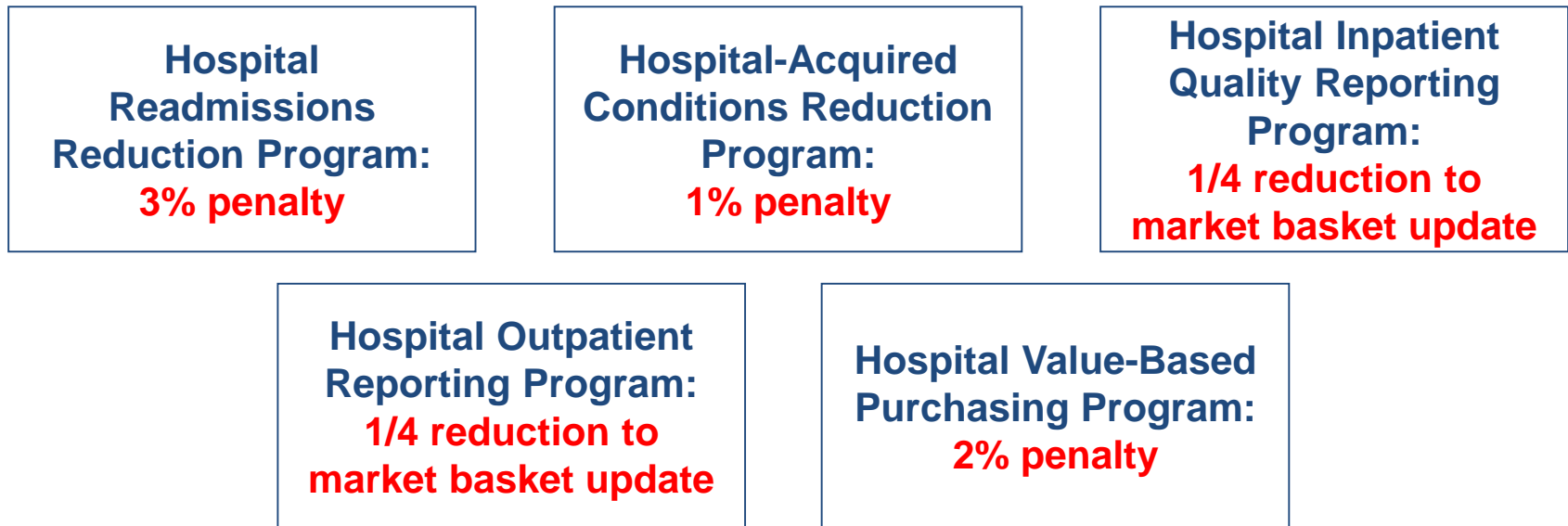
Supporting early nutritional care can reduce pressure ulcer incidence, length of stay, 30-day readmissions, and costs of care<sup>2</sup>



Implementation of a nutrition-focused quality improvement program resulted in over \$4.8M in cost savings across four hospitals<sup>3</sup>

# 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**

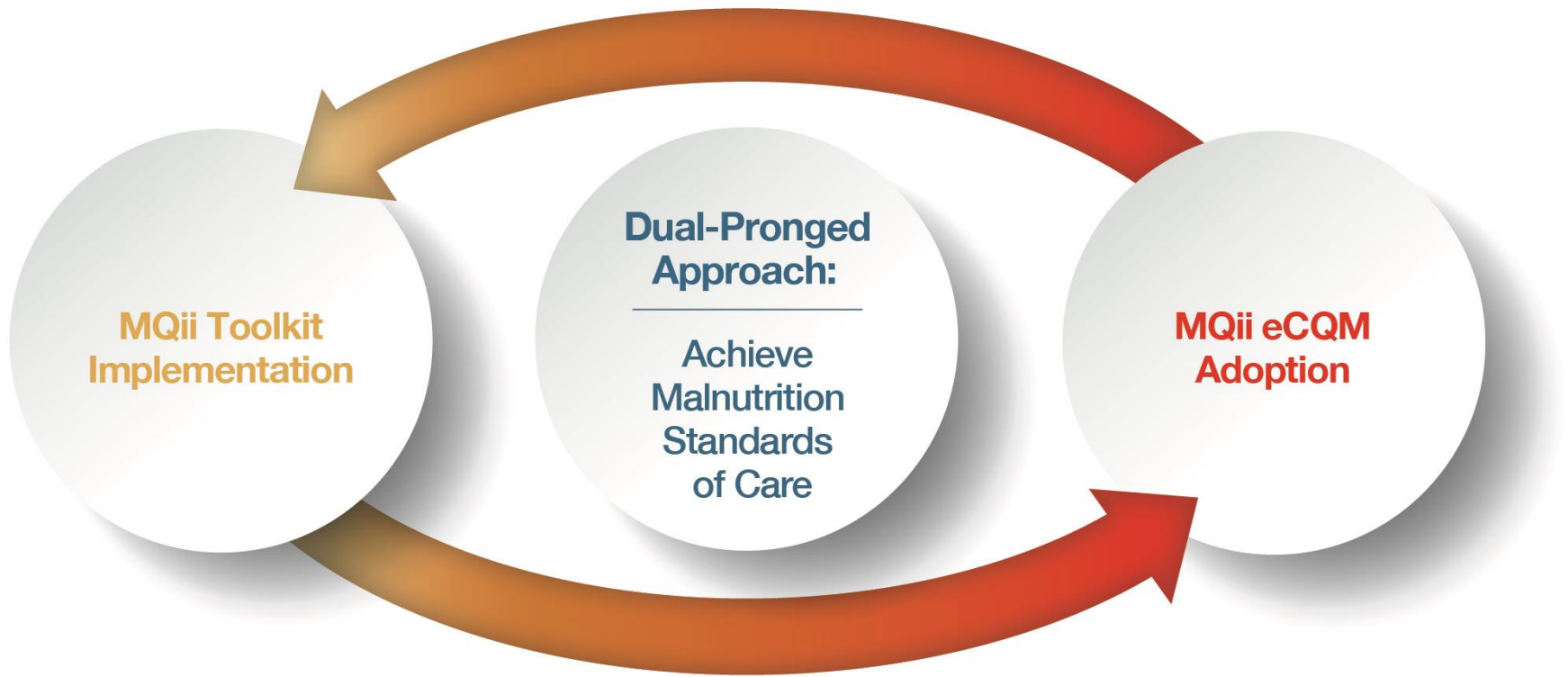
Pilot Testing

**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**

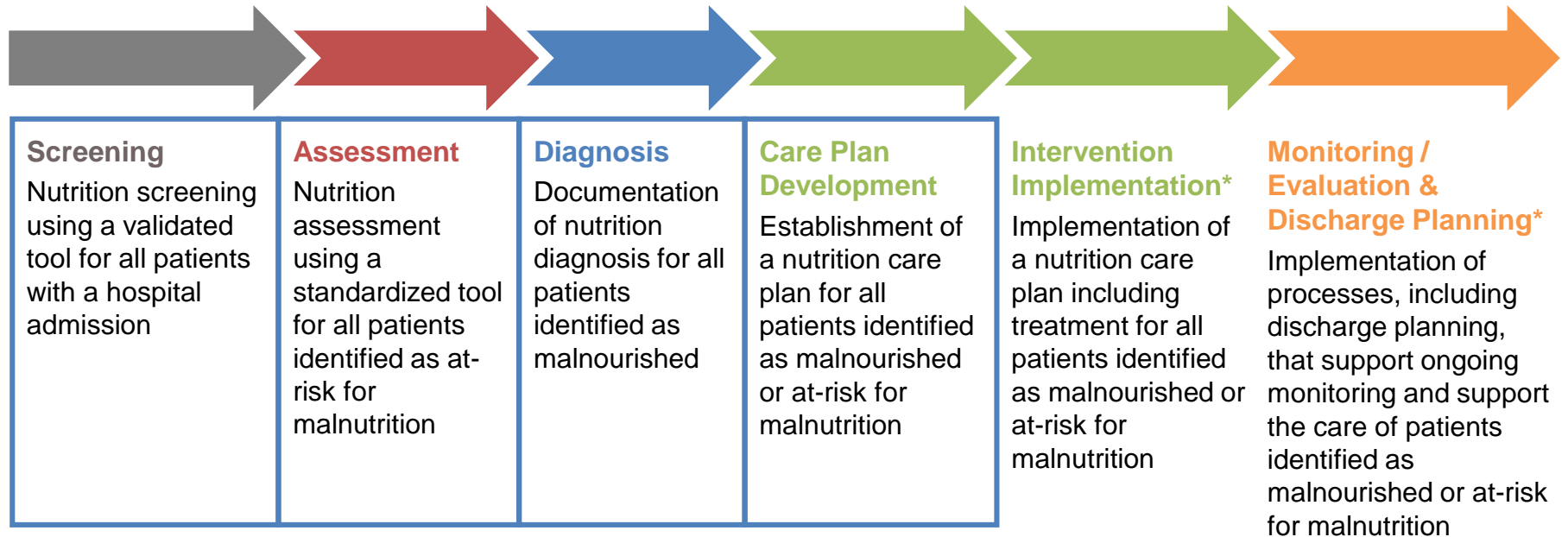
**Access the Toolkit**

- **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



### Clinician Typically Responsible for Each Step

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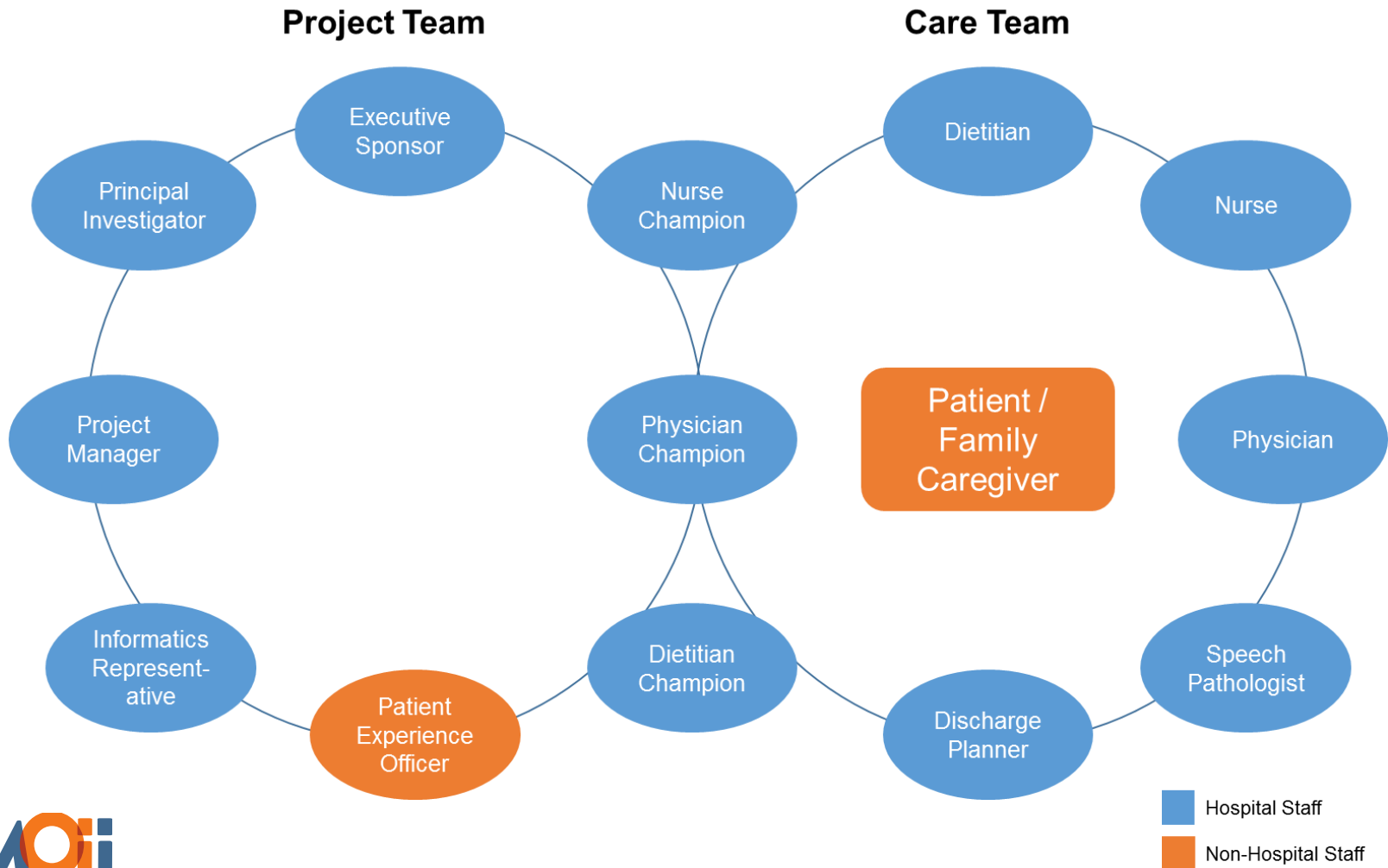


= Measure developed to address this step in the malnutrition care workflow

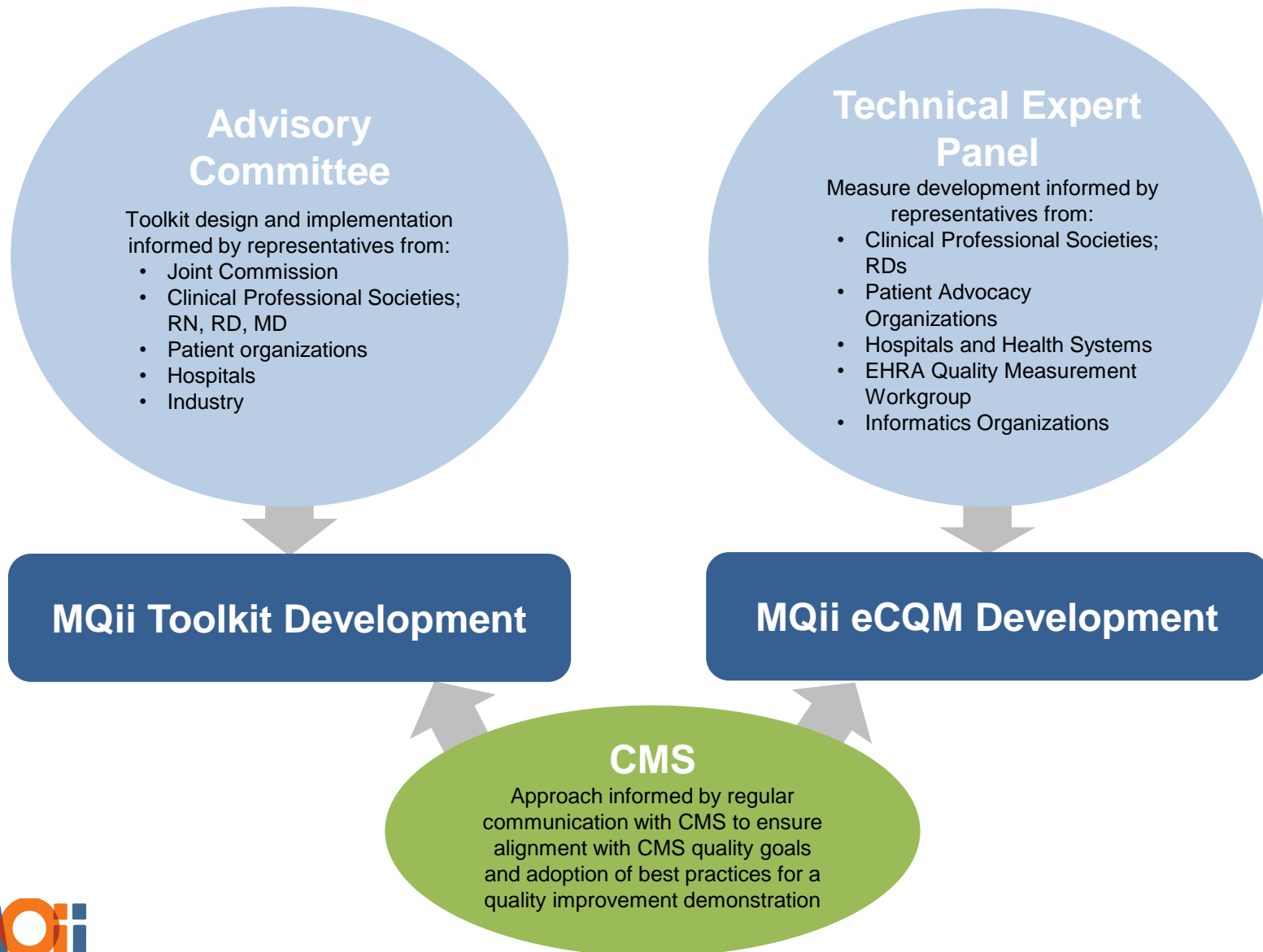
\*Measures for monitoring and evaluation, and discharge planning were not technically feasible due to limitations in availability of measure data.

# 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





# The MQii Learning Collaborative: Toolkit and eCQM Testing and Implementation

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.



# 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)	
<b>Screening</b> (eCQM #1)	1949/2756 <b>(70.7%)</b>	1218/1713 <b>(71.1%)</b>
<b>Assessment</b> (eCQM #2)	98/346 (28.3%)	55/114 (48.3%)
<b>Care Plan</b> (eCQM #3)	27/32** <b>(84.4%)</b>	183/186 <b>(98.4%)</b>
<b>Diagnosis</b> (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***



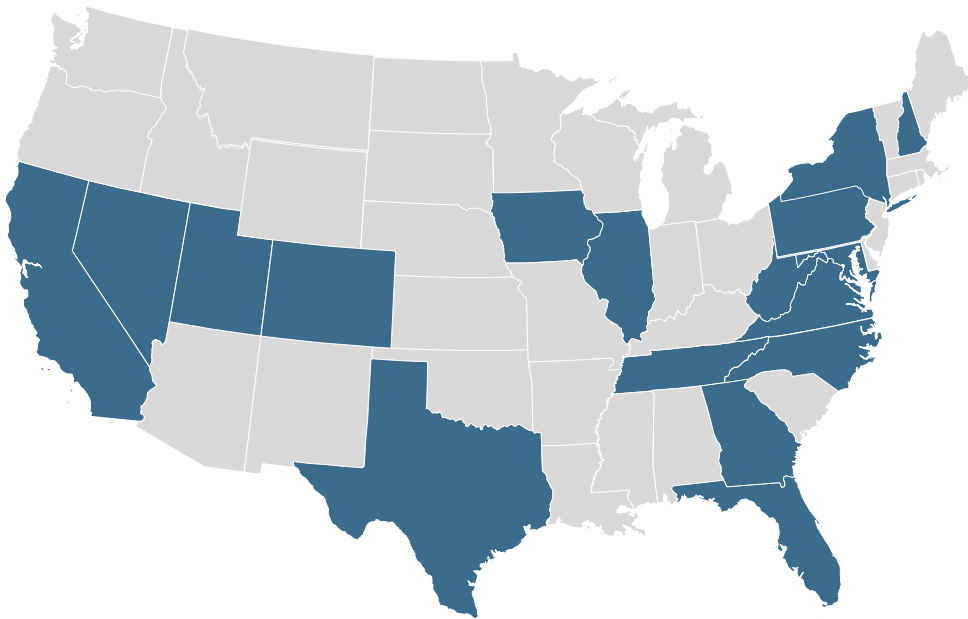
\*\*Measure calculation is based off of a chart abstracted sample and not representative of the entire hospital's performance; the data required for full electronic report was not available in the format necessary to report a hospital-wide performance rate.

# 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.”



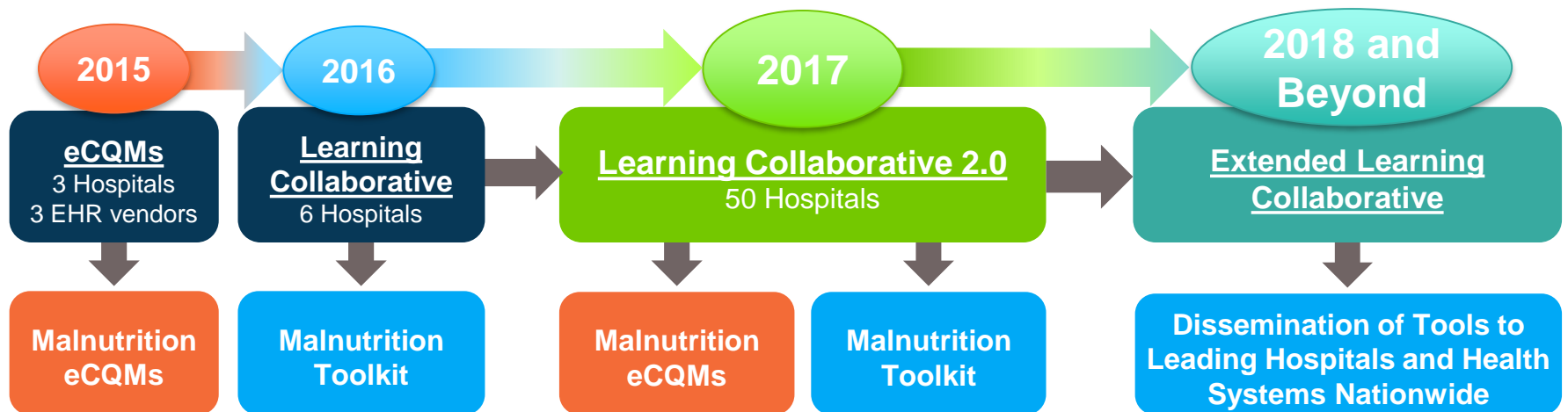
“The MQii definitely **opened the door to resources** needed to help collect data as well as put improvement plans in place, whether it be with IT, nursing, medical staff, etc.”



“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](mailto: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](http://www.MQii.today)