



MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

# Decoding eCQMs

## The End-to-End Process of Generating and Reporting eCQMs from Your EHR

**April 11, 2024**

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

# Today's Discussion Focuses on the Process of Generating and Reporting eCQMs from Your EHR and Will Cover:

Terminology

Assembling the Right Team

Process Flow: Timing and Phases

- Planning Phase
- Discovery Phase
- Build & Implementation Phase
- Submission Phase

Common Pain Points, Challenges, and Best Practices

Resources

Questions & Answers

# What are eCQMs?

---

- **Quality measures** use standard definitions and specifications to quantify the quality of care processes, outcomes, and experience.
- **Electronic Clinical Quality Measures (eCQMs):** are quality measures “specified in a standard electronic format that use data electronically extracted from EHRs and/or health IT systems to measure the quality of health care provided.”<sup>1</sup>
- The **Global Malnutrition Composite Score** is one of 12 eCQMs<sup>2</sup> designed for measuring quality of hospital care and is available for regulatory reporting for the first time in 2024

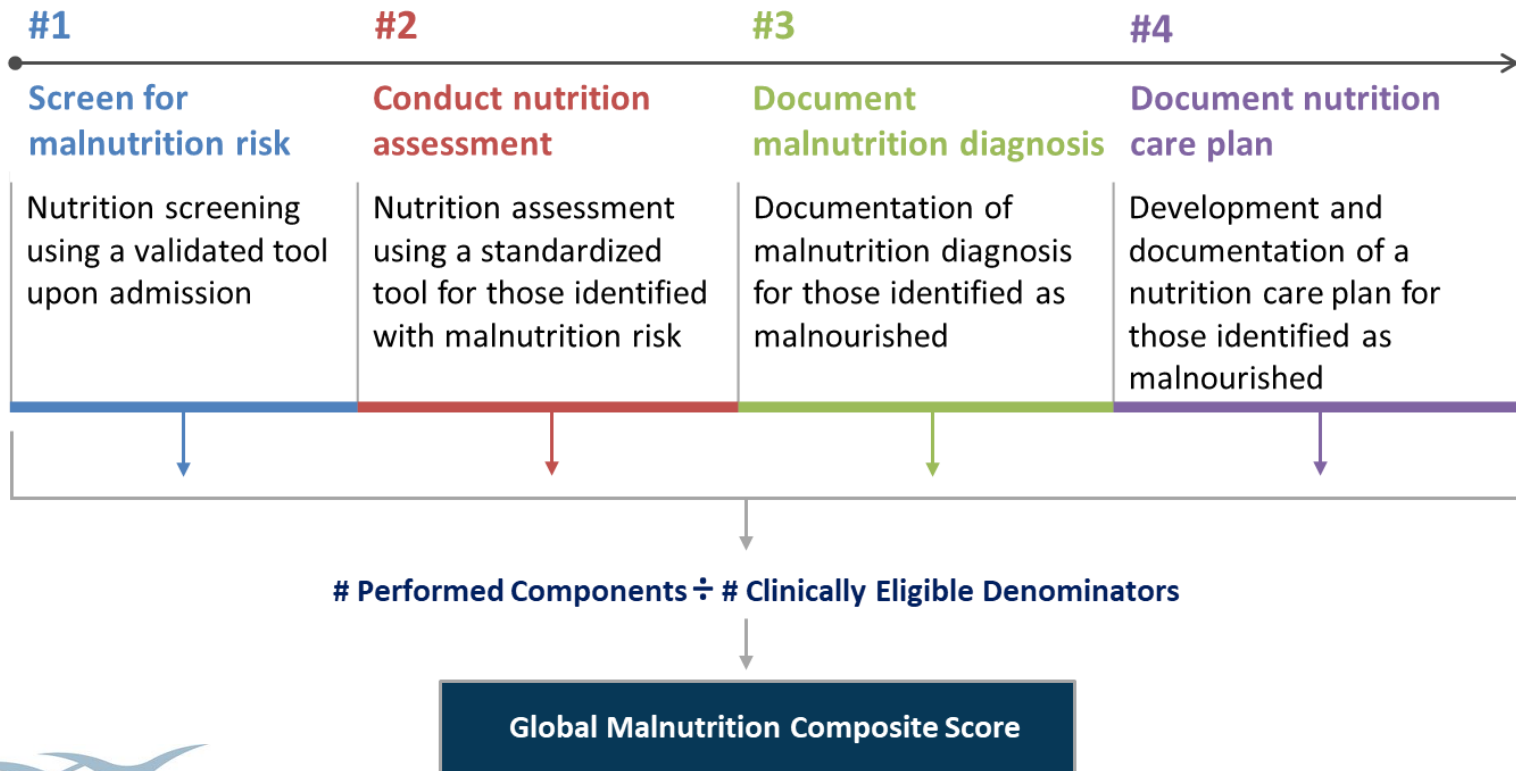


EHR: Electronic Health Record; IT: Information Technology

1 <https://www.cms.gov/medicare/regulations-guidance/promoting-interoperability-programs/electronic-clinical-quality-measures-basics>

2 [https://ecqi.healthit.gov/eh-cah?qt-tabs\\_eh=eh-cah-ecqms&globalyearfilter=2024&global\\_measure\\_group=eCQMs](https://ecqi.healthit.gov/eh-cah?qt-tabs_eh=eh-cah-ecqms&globalyearfilter=2024&global_measure_group=eCQMs)

# The Global Malnutrition Composite Score



# Key Terminology

- **Value sets** are the lists of specific terms - and their codes - used to describe the data elements and concepts in quality measures. Value sets provide groupings of unique values along with a standard description or definition from one or more standard vocabularies used to describe the same clinical concept (e.g., diabetes, clinical visit, malnutrition assessment) within quality measures

Value Set Name	Code	Description	Code System
Malnutrition Risk Screening	84291-4	Nutrition and dietetics Risk assessment and screening note	LOINC
Malnutrition Risk Screening	98967-3	Nutritional Risk Screening 2002 panel	LOINC
Malnutrition Risk Screening	98968-1	Initial screening NRS_2002	LOINC
Malnutrition Risk Screening	98972-3	Final screening NRS_2002	LOINC
Malnutrition Screening At Risk Result	129689002	At risk for nutritional problem (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	129845004	At risk for imbalanced nutrition, less than body requirements (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	445421000124101	At risk for inadequate intake of multiple nutrients (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704358009	At risk of nutritional deficit (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704361005	At risk of deficient food intake (finding)	SNOMEDCT

# Key Terminology

- **“Front end”** refers to the user interface of the EHR - in other words, what you actually see on the screen when documenting patient care or reviewing a patient’s chart. This is the view you have as a user directly interacting with the EHR.
- **“Back end”** refers to the EHR database or your hospital’s data warehouse. How data is stored in the back end can include specific field names and/or mappings of field names and/or values to specific codes.

Poorly because of a Decreased Appetite

Yes  
 No

Malnutrition Screening Tool Score

Right Click in Box Below to View MST Tool

MST High Risk = 2 or More at Risk Eating Poorly and/or Recent Weight Loss

Field	Operator	Value	Mapped_Code
MST_score	!=	null	84291-4



MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

## Assembling the Right Team

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

# Team Members and Their Roles

---

## Hospital Quality

- Usually serve as the key coordinators of the eCQM process and are ultimately accountable for reporting accurately and on-time
- Work with care teams to ensure that in normal clinical workflow that data is captured in correct format and field
- Data are validated and performance is shared with project team to track progress internally
- Lead performance improvement efforts

## Hospital IT

- Lead the technical / IT side of the eCQM reporting efforts
- Work with the quality and clinical teams to identify whether identified issues are related to how the front end is designed or how data is stored/mapped in the back end
- Communicate and collaborate with EHR and/or eCQM vendor
- Generate reports needed to track progress and identify problems

## Clinical Care Experts

- Provide insight and guidance to Quality and IT on the nutrition role and process
- Identify clinical champion/ influencer, team, and roles to lead implementation
- Ensures care team is properly educated on malnutrition QI and GMCS opportunity
- Ensures care team workflows and resources are standardized
- Utilize a mechanism to track performance throughout the year

## EHR and/or eCQM Vendor

- For many hospitals, their EHR vendor and their eCQM vendor is one and the same - very common for Epic and Oracle-Cerner
- Others may use a separate third-party eCQM vendor in addition to their EHR vendor
- Ensures the EHR is updated to support and report on that year's eCQMs
- May identify necessary structured data elements, mapping, frequency, and existing use in other eCQMs



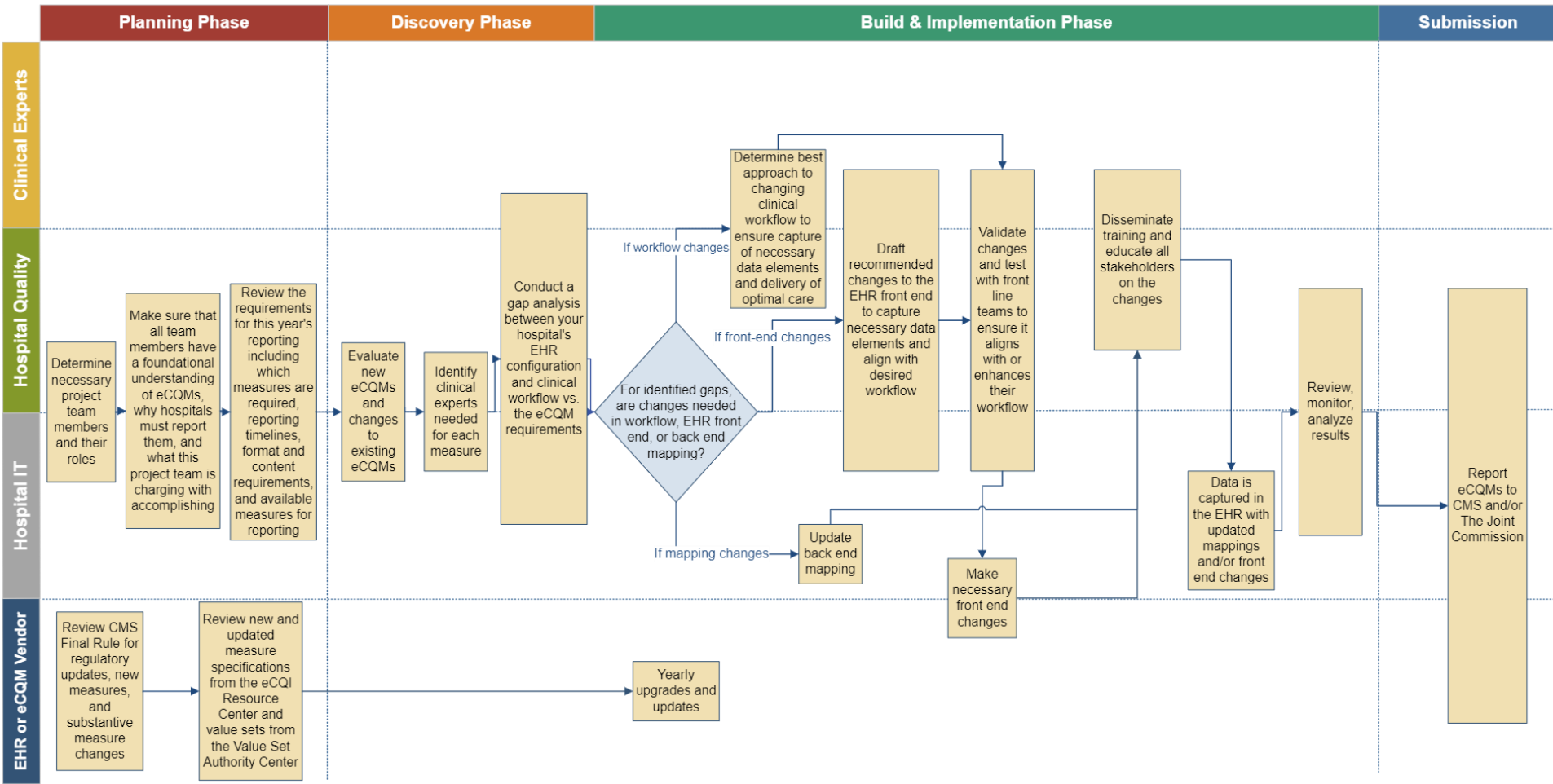


MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

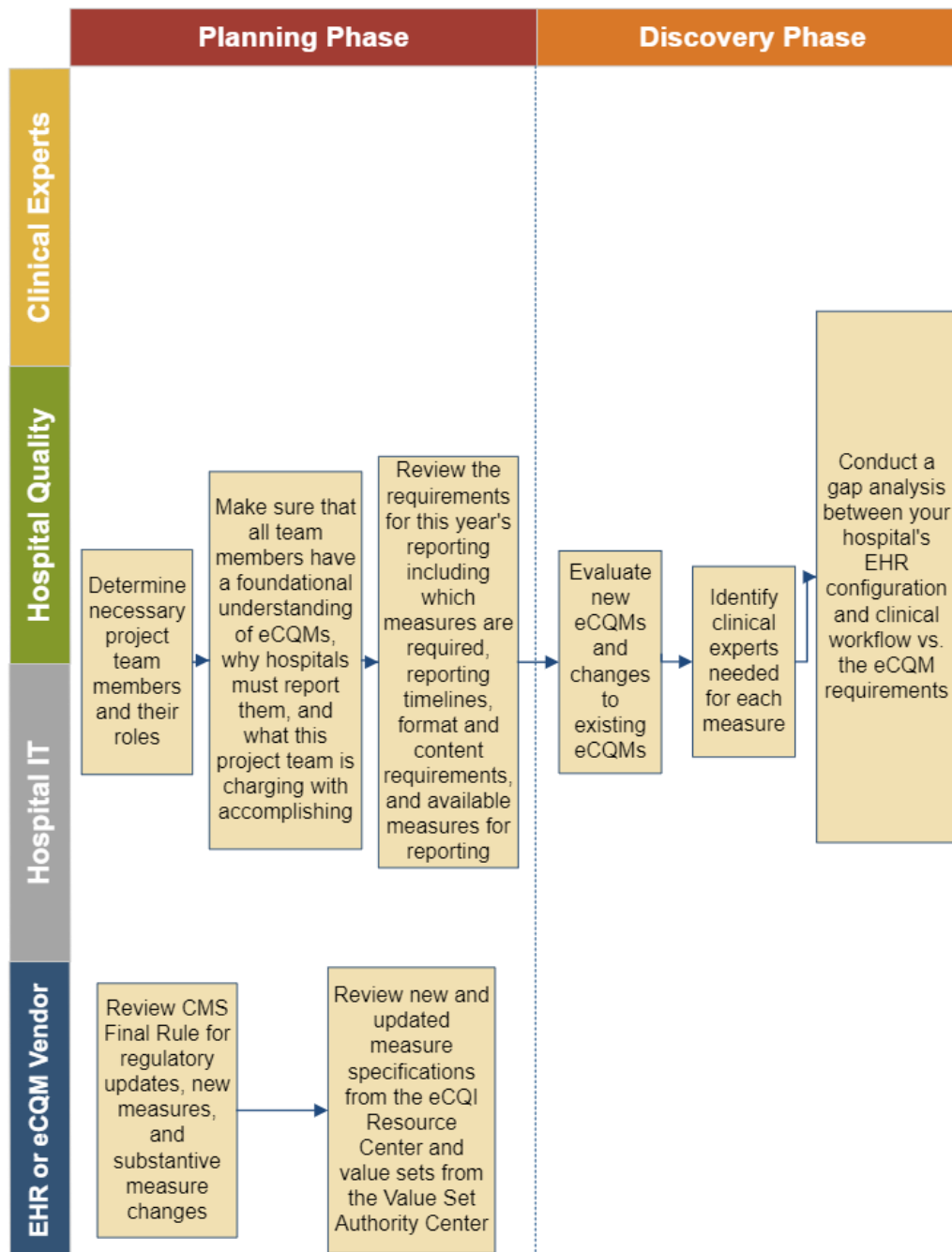
## Process Flow: Timing and Phases

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

# The eCQM Annual Cycle Involves Multiple Steps Coordinated Across Teams

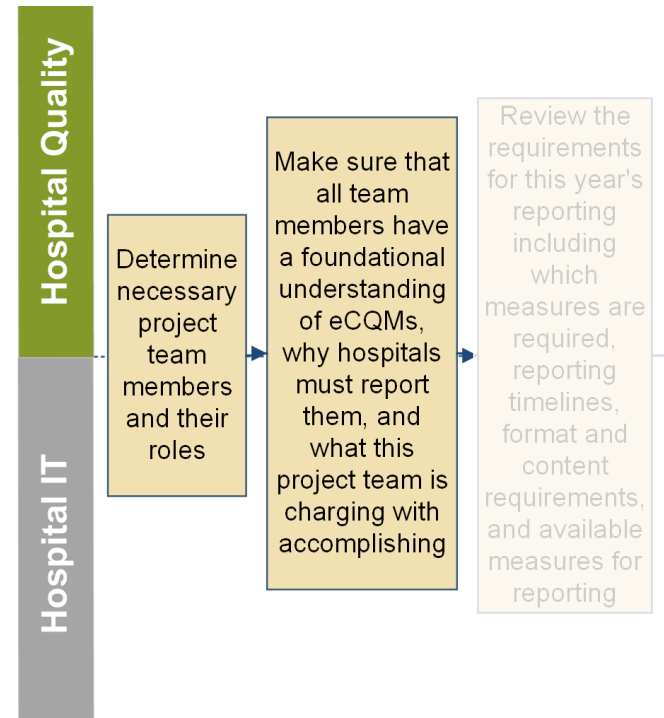


# Planning & Discovery Phases



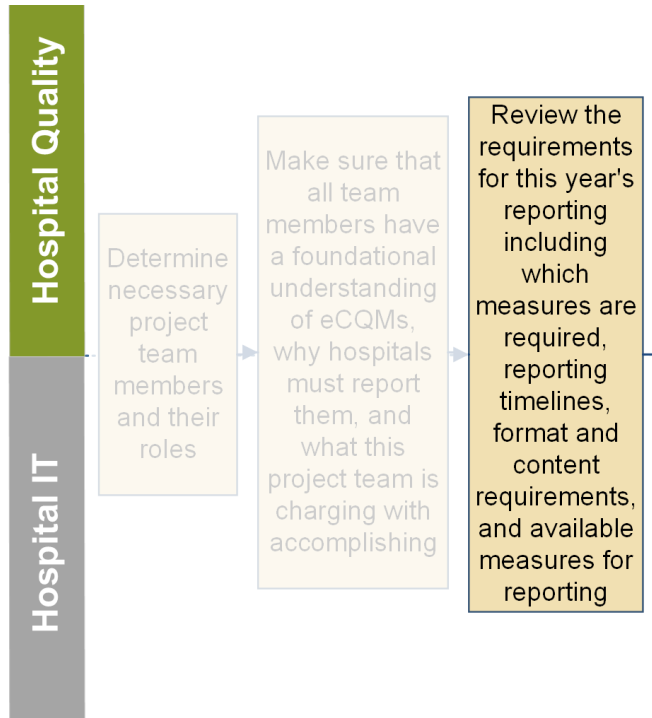
# Planning Phase: Hospital IT and Quality Set up the Team

- Hospital IT and Quality teams determine necessary project team members and their roles
- Make sure that all team members have a foundational understanding of:
  - eCQMs
  - Why hospital must report them
  - What this project team is charged with accomplishing
- This doesn't yet include the clinical team members – this phase is focused on the overall eCQM process and not yet looking at individual measures that will require specific clinical care team roles



eCQMs: Electronic Clinical Quality Measures; IT: Information Technology

# Planning Phase: Hospital IT and Quality Teams Review Requirements



- Hospital IT and Quality teams review that year's reporting requirements:
  - Includes reviewing the requirements for the upcoming year's reporting for CMS (and The Joint Commission, if applicable) including which measures are required, reporting timelines, format and content requirements, available measures for reporting
  - Some hospitals will select which measures to focus on at the beginning of the year, some will wait until the end of the year

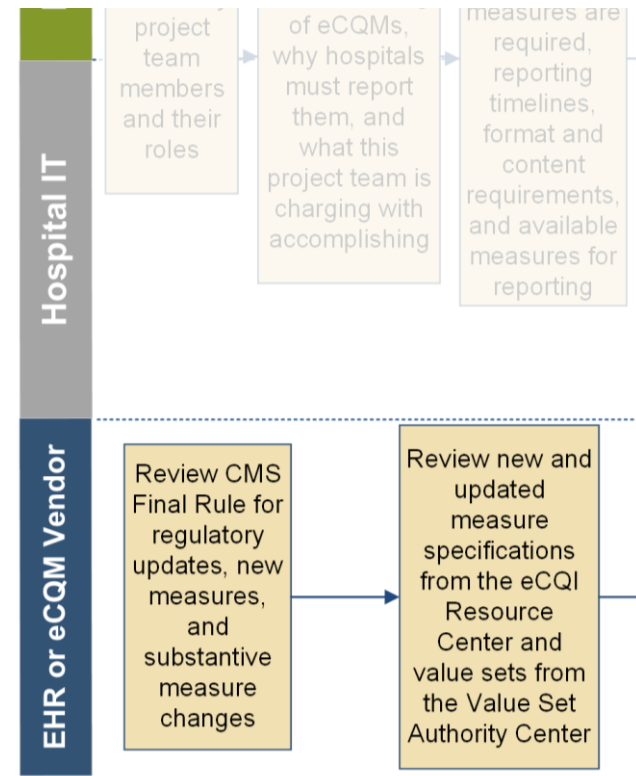


## HOMEWORK

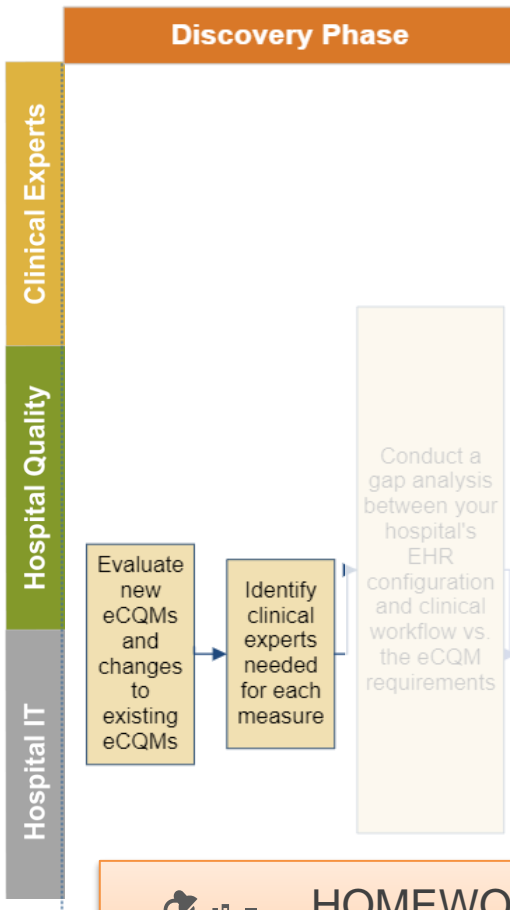
Review the resources available in the MQii website's [GMCS sections](#) and the Commission on Dietetic Registration's [GMCS site](#) to get the basics of the reporting programs and be prepared to engage with your quality and IT colleagues.

# Planning Phase: EHR Vendor Will Review Final Rule and Updated Measure Specifications

- EHR & eCQM vendors have to prepare their platforms for supporting the upcoming year's eCQM programs for their customers
- EHR vendors will review CMS Final Rule for regulatory updates, new measures, and substantive measure changes
- They then will review new updated measure specifications from the eCQI Resource Center and value sets from the Value Set Authority Center



# Discovery Phase: Hospital IT and Quality Teams Evaluate New and Changes to Existing eCQMs



- Take an initial look at the new eCQMs for that year and any major changes to existing eCQMs
- Based on that review, identify the types of clinical experts that will be needed for each measure
  - Consider the skills needed: leadership, understanding of typical care processes, understanding of clinical documentation processes, can speak to staff's challenges and preferences in the current system

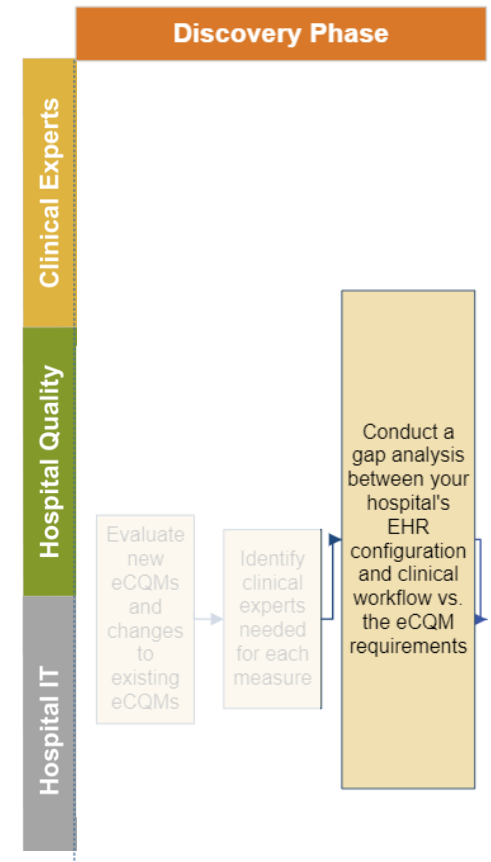


## HOMEWORK

1. If you haven't already, identify which team member(s) from your nutrition care team would be best suited for serving as the clinical expert representing GMCS.
2. Find out who the quality leader for eCQMs is at your institution. Introduce yourself!

# Discovery Phase: Take a Deeper Dive into the Measures and Conduct a Gap Analysis

- Discovery phase will be primarily the responsibility of the Quality and IT teams, but they likely will need to consult clinical team members throughout
- Review the measure descriptions, numerators, and denominators
  - Is this a population you care for?
  - Is this a care process that you're already delivering?
    - Who is involved in the process? Which departments of the hospital and which team members?



## HOMEWORK

Think about your hospital's current nutrition care process. Are you consistently completing all of the steps required for the GMCS? Does this apply to all patients or a subset? Is there variation between departments or units in the whether or how consistently the process is carried out?



# Discovery Phase: Take a Deeper Dive into the Measures and Conduct a Gap Analysis

- Review the measure logic and data elements
  - Look at the measure flow and calculation. Think about how this compares to your current care processes and your current documentation
  - Are you currently capturing these data elements? If so, are you capturing them in discrete fields?
    - What are the relationships between the necessary data elements and the fields in your EHR? 1:1?
  - How consistently are you capturing the necessary data elements?
  - Are there multiple places in the EHR that someone could choose to document?

Data Elements and coded QDM Attributes containe

[\["Assessment, Performed": "Malnutrition Risk Screening"\]](#)

[\["Assessment, Performed": "Nutrition Assessment"\]](#)

[\["Diagnosis": "Malnutrition Diagnosis"\]](#)

[\["Encounter, Performed": "Emergency Department Visit"\]](#)

[\["Encounter, Performed": "Encounter Inpatient"\]](#)

[\["Encounter, Performed": "Observation Services"\]](#)

[\["Intervention, Order": "Hospital Dietitian Referral"\]](#)

[\["Intervention, Performed": "Nutrition Care Plan"\]](#)

[\["Patient Characteristic, Ethnicity": "Ethnicity"\]](#)

[\["Patient Characteristic, Payer": "Payer"\]](#)

[\["Patient Characteristic, Race": "Race"\]](#)

[\["Patient Characteristic, Sex": "ONC Administrative Sex"\]](#)

[\["Result": "Malnutrition Screening At Risk Result"\]](#)

[\["Result": "Malnutrition Screening Not At Risk Result"\]](#)

[\["Result": "Nutrition Assessment Status Moderately Malnourished"\]](#)

[\["Result": "Nutrition Assessment Status Not Or Mildly Malnourished"\]](#)

[\["Result": "Nutrition Assessment Status Severely Malnourished"\]](#)

<https://ecqi.healthit.gov/measure-data-elements/179431>



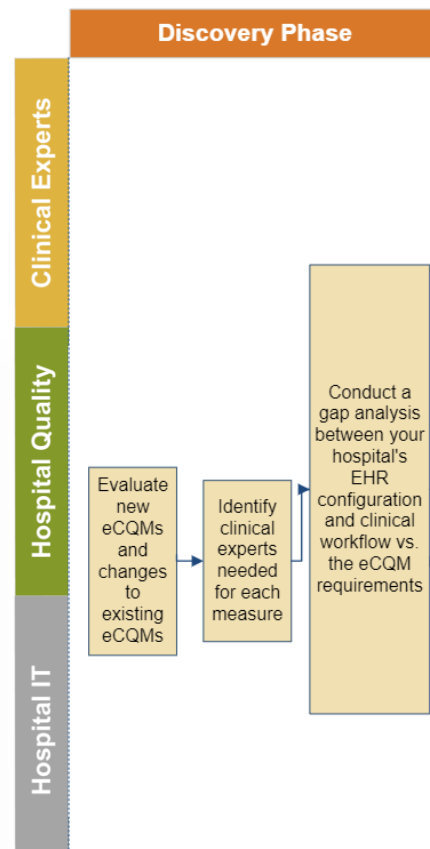
## HOMEWORK

Spend some time looking at your nutrition documentation with a critical eye. Are the fields where you document aligned with the data elements of GMCS. Then talk to your colleagues and ask to see how they document. Is there variation in how each of you approaches this? Different places in the EHR?

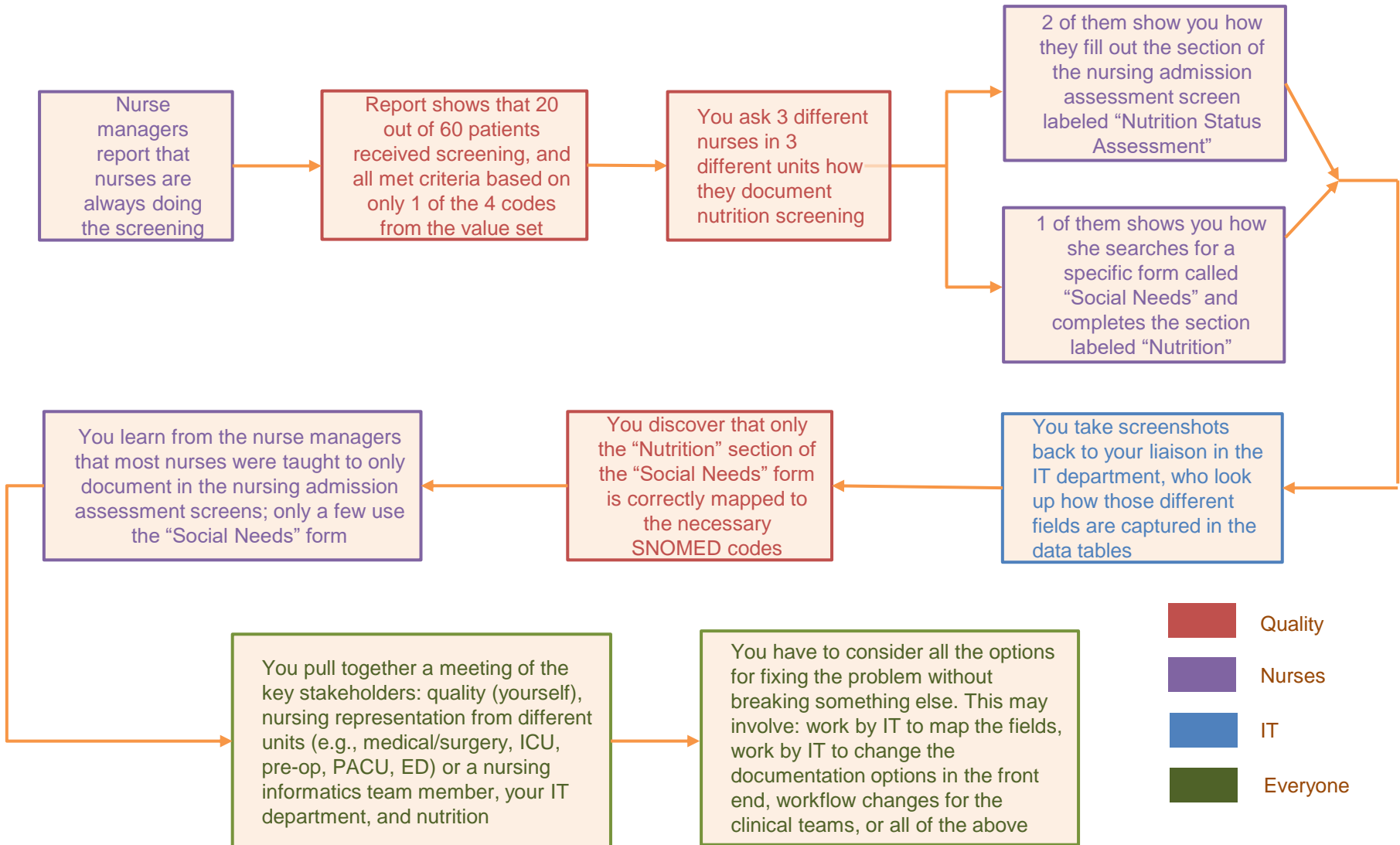
# Discovery Phase: Take a Deeper Dive into the Measures and Conduct a Gap Analysis

- Review the value sets for each data element
- IT staff will then need to compare value sets to the fields where the information is documented to see if they are already mapped to the necessary codes

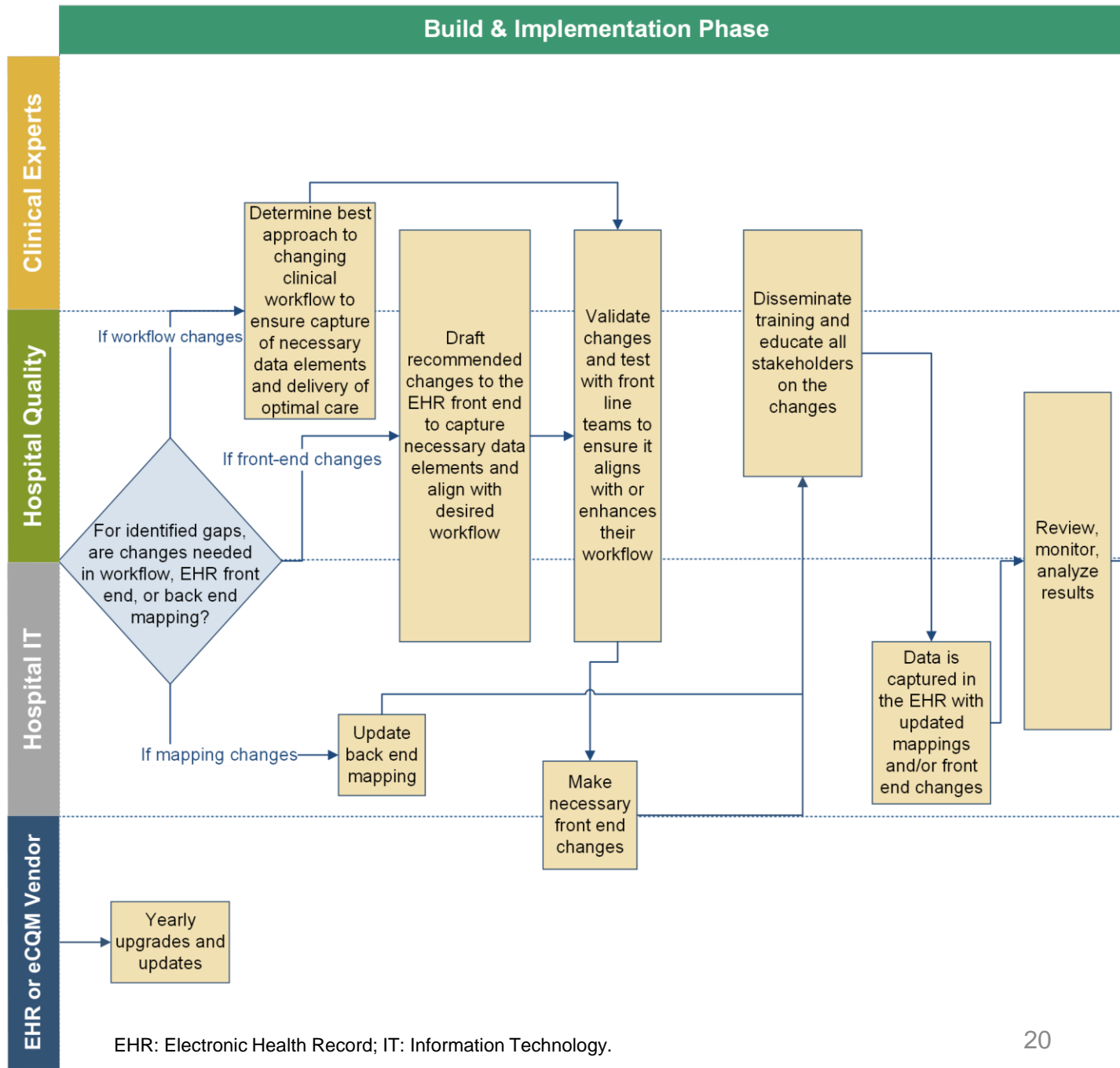
National Library of Medicine Value Set Authority Center			
Value Set Name	Code	Description	Code System
Malnutrition Risk Screening	84291-4	Nutrition and dietetics Risk assessment and screening note	LOINC
Malnutrition Risk Screening	98967-3	Nutritional Risk Screening 2002 panel	LOINC
Malnutrition Risk Screening	98968-1	Initial screening NRS_2002	LOINC
Malnutrition Risk Screening	98972-3	Final screening NRS_2002	LOINC
Malnutrition Screening At Risk Result	129689002	At risk for nutritional problem (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	129845004	At risk for imbalanced nutrition, less than body requirements (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	445421000124101	At risk for inadequate intake of multiple nutrients (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704358009	At risk of nutritional deficit (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704361005	At risk of deficient food intake (finding)	SNOMEDCT



# Example of Approach to Determine Gaps in Malnutrition Screening

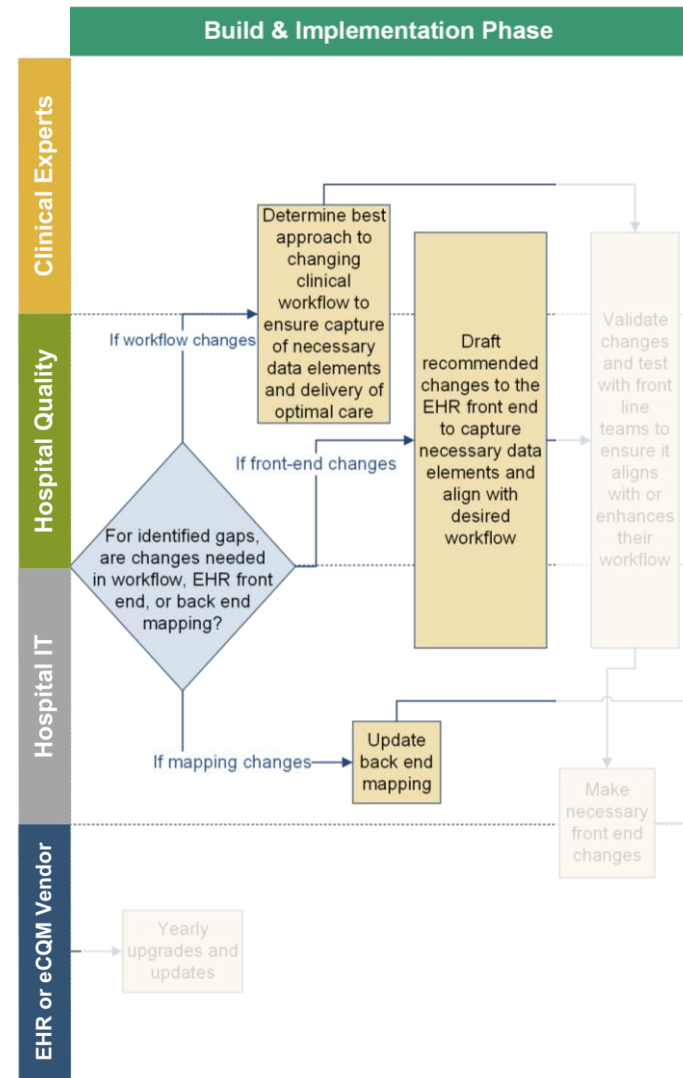


# Build & Implementation Phase



# Build & Implementation Phase: Identify Where Changes Are Needed

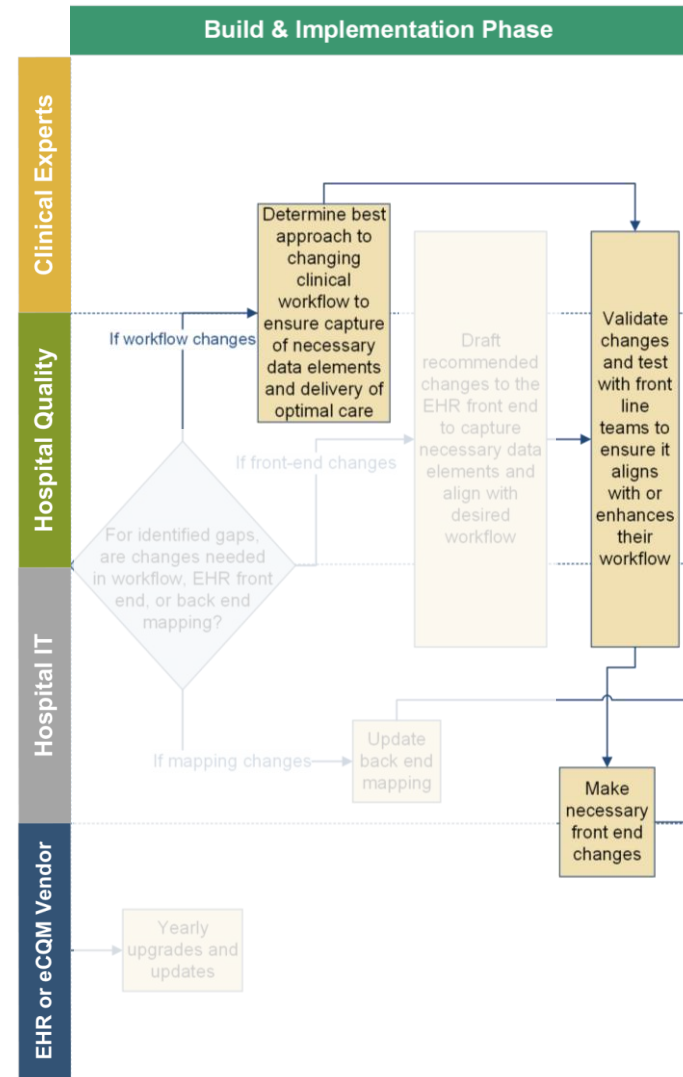
- For identified gaps, hospital IT and Quality team members assess if changes are needed to the:
  - Workflow
  - EHR front-end
  - Back-end mapping
- Experts have pointed out that approximately 75% of the changes needed are back end mapping-related



CMS: Centers for Medicare & Medicaid Services; eQIMs: Electronic Clinical Quality Measures; EHR: Electronic Health Record; IT: Information Technology.

# Build & Implementation Phase: Workflow Changes

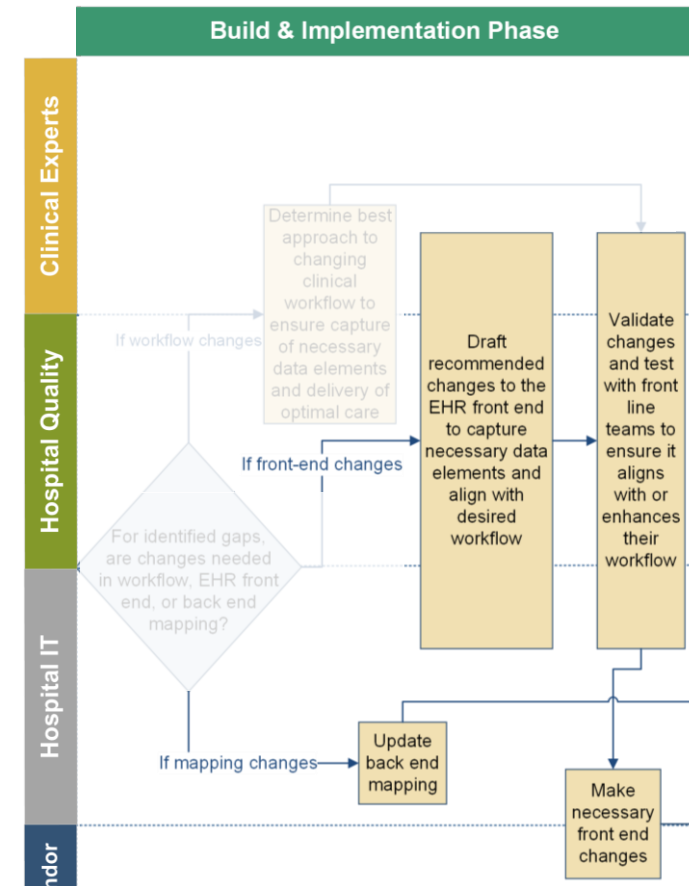
- If there are workflow changes, clinical team members and the quality leader work together to determine the best approach to changing clinical workflow to ensure capture of necessary data elements and delivery of optimal care
- Teams will validate changes and test with front line clinicians to ensure the changes are feasible, enhance patient care, and don't cause additional burden
  - Are there any unintended consequences of this change?
  - Will people use the new process or create workarounds?



CMS: Centers for Medicare & Medicaid Services; eQIMs: Electronic Clinical Quality Measures; EHR: Electronic Health Record; IT: Information Technology.

# Build & Implementation Phase: Front-End Changes

- If there are front-end changes, the clinical experts, Quality and IT team members all work together to draft recommended changes to the EHR front-end to capture necessary data elements and align with desired workflow
- Teams will validate changes and test with front line clinicians to ensure it aligns with or enhances their workflow
  - Are there any unintended consequences of this change?
  - Will people use the new documentation or create workarounds?
- Usually any necessary front-end changes are made by the hospital's IT team, though some use their EHR vendor to do this



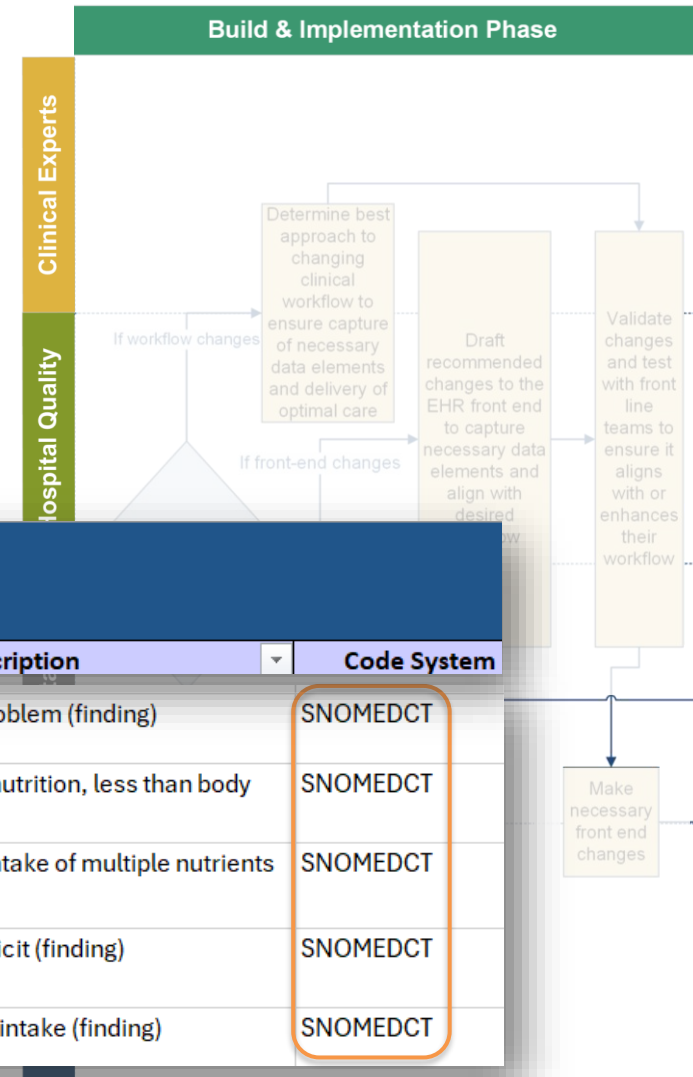
## HOMEWORK

Remember to keep quality improvement in mind. If you're going to make workflow or documentation changes, think about how those changes could improve care! Are there processes you've been thinking could be improved that would align with the goals of this eCQM work?



# Build & Implementation Phase: Mapping Changes

- If there are mapping changes, Hospital IT can do the necessary back-end mapping updates but will need the input of Clinical and Quality to determine which codes should be used
- If working with a third-party eCQM vendor, this may be something done in their systems or that they can assist with

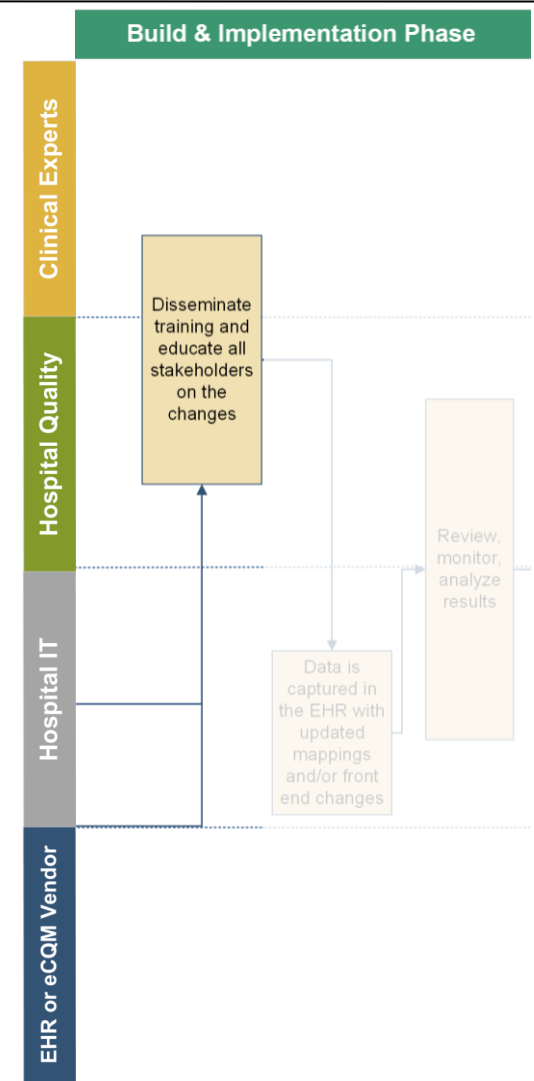


Value Set Name	Code	Description	Code System
Malnutrition Screening At Risk Result	129689002	At risk for nutritional problem (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	129845004	At risk for imbalanced nutrition, less than body requirements (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	445421000124101	At risk for inadequate intake of multiple nutrients (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704358009	At risk of nutritional deficit (finding)	SNOMEDCT
Malnutrition Screening At Risk Result	704361005	At risk of deficient food intake (finding)	SNOMEDCT



# Build & Implementation Phase: Educate on Changes

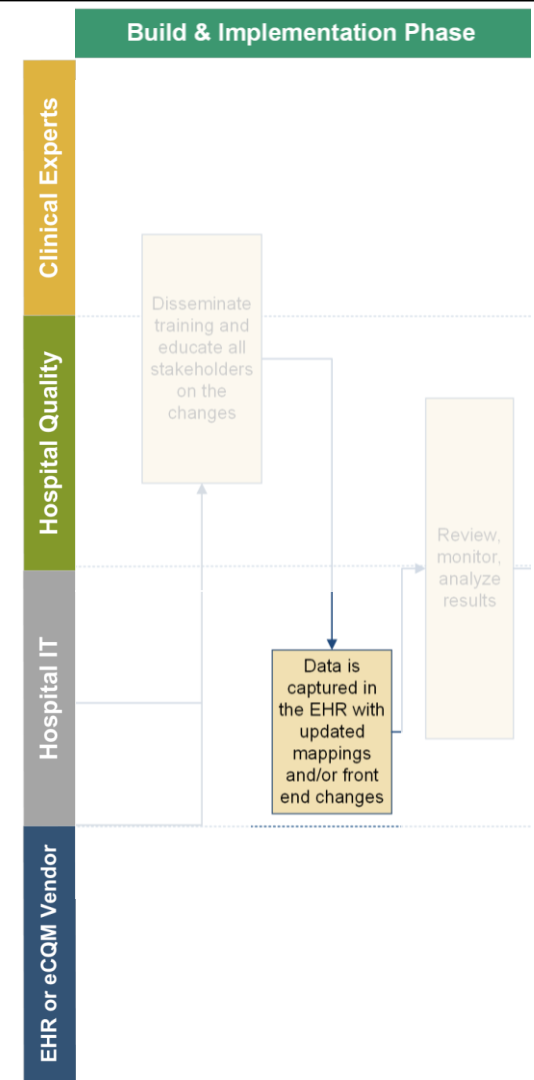
- Quality and clinical team members work to develop and disseminate training to ensure all stakeholders are ready for the front end or workflow changes being made
- “Shoulder-based training” is highly effective
- Identify and equip “change champions” to engage and support frontline staff



EHR: Electronic Health Record; IT: Information Technology.

# Build & Implementation Phase: Data Capture

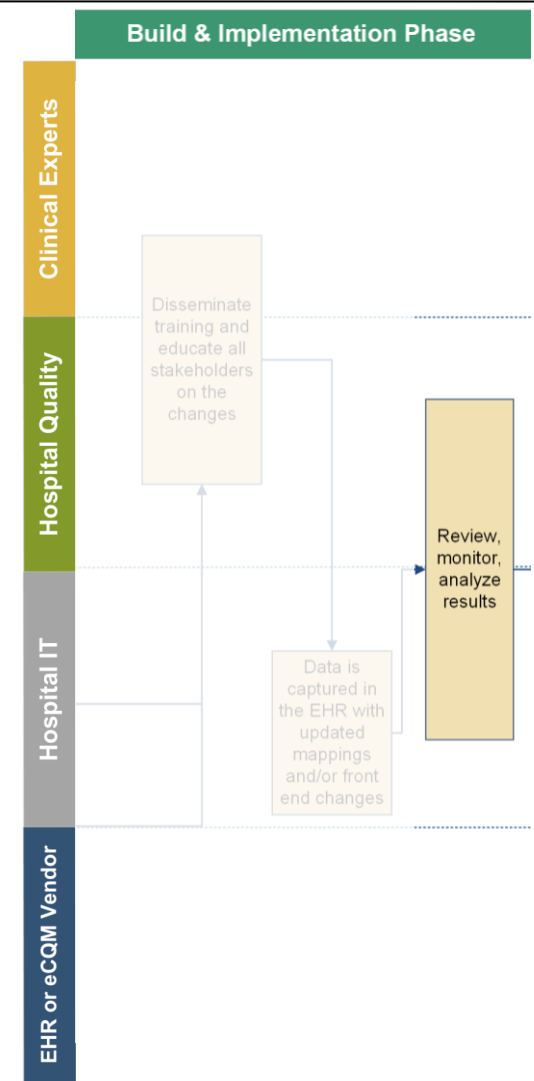
- Data is now captured in the EHR with updated mappings and/or front-end changes
- Critical know exactly what you **expected** to change and any data points you need to make sure **didn't** change
- Some EHR systems have tools to identify users who are struggling or assess how efficient the new documentation process is



EHR: Electronic Health Record; IT: Information Technology.

# Build & Implementation Phase: Review, Monitor, Analyze Results

- The team needs to carefully review, monitor, and analyze results on an ongoing basis
- If problems arise, will need to return to assessing the issue and potentially making changes again
- Reports are critical at this stage:
  - Official eCQM reports are typically provided by your vendor and are usually more for the regulatory submission purposes or tracking measure results. These reports are built exactly to the measure specifications
  - Internal reports built by your hospital IT team are used more for quality improvement work as they can be customized

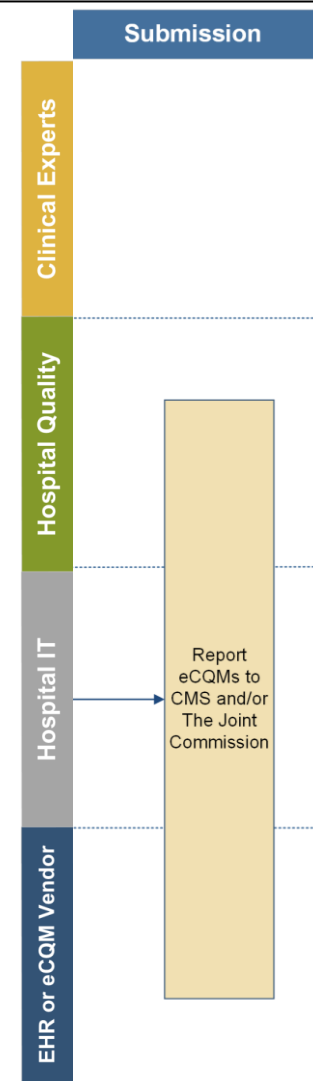


## TIP

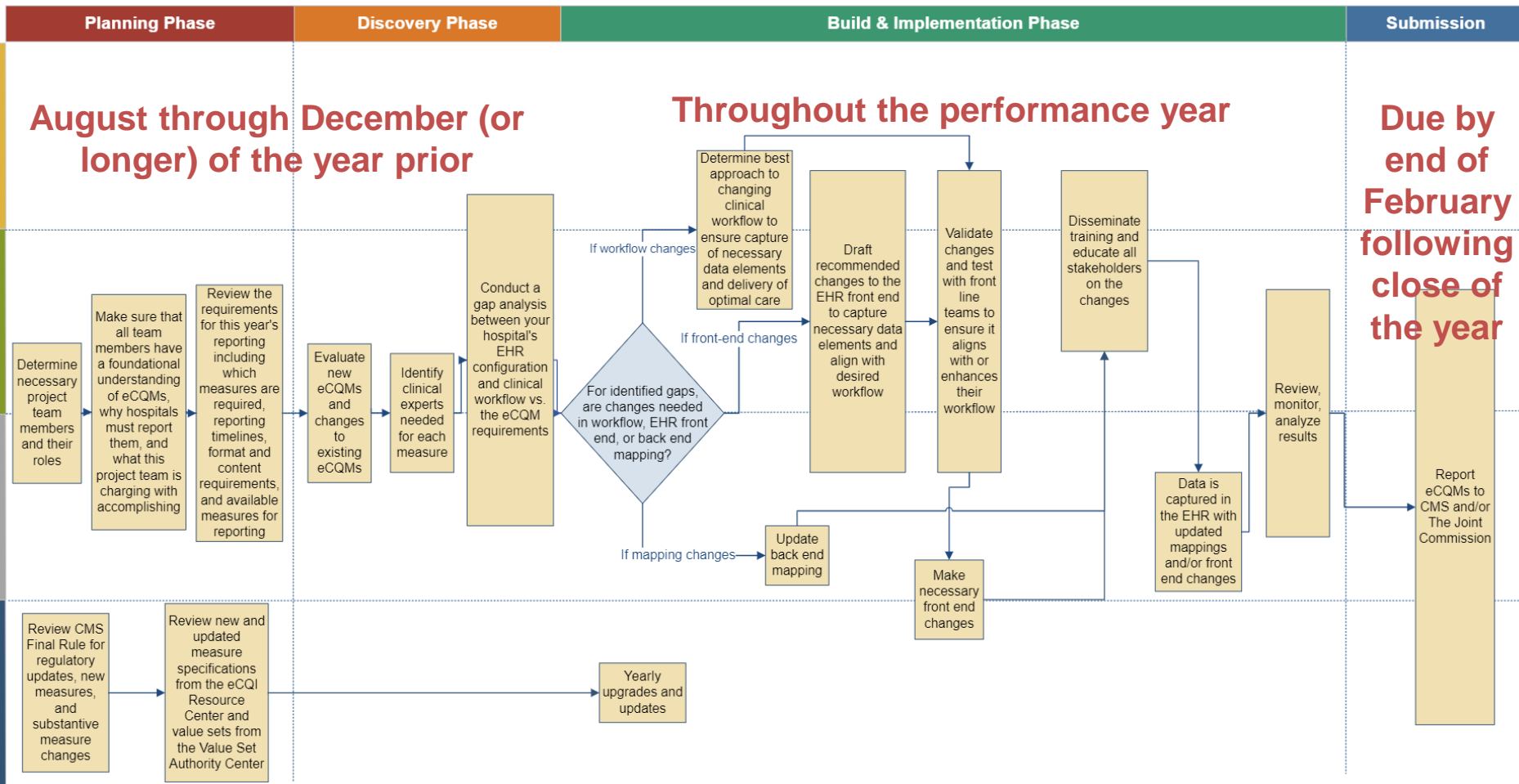
Consider whether some of the reports your team builds for eCQM purposes can be used for broader quality improvement initiatives.

# Submission Phase: Hospital IT and Quality Teams Report eCQMs

- Hospital leadership determines which eCQMs to submit
- The quality leader works with the IT team and the eCQM vendor to ensure the submission occurs accurately and on-time



# Due to the Timing of the Regulatory and Reporting Cycle, You'll Likely be Working on 2 eCQM Years at Once





MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

# Common Pain Points, Challenges, and Best Practices

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

# Recap: Common Pain Points and Challenges

---

Not capturing data in a discrete way

Data elements not mapped correctly in the backend

Data could be captured in more than one place in the EHR

Not having the right reports available to check progress

# Best Practices

---

It's almost always easier to make changes on the back end than to push through changes to the clinician workflow

Education to front line teams through multiple channels on what they need to do any/or any updates to the EHR (e.g., site-level leadership, med exec, "shoulder-based training"). Include clear guidance on who can help if they find issues in the process

Share performance data broadly with front line clinical teams with clear tips on how they can help improve

EHRs are highly customizable, which can cause trouble in updating to standard requirements. Some EHRs have a feature that assesses your EHR configuration vs. best practices

- Some have a feature that can identify which users are having trouble - "how many mouse clicks to accomplish a task"
- Make sure your order sets trigger tasks that link to the correct forms/fields to fill out

Align your eCQM strategy with your quality improvement strategy





MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

## Resources

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

# Additional eCQM Resources

---

- [eCQI Resource Center](#)
- [Value Set Authority Center](#)
- GMCS-specific:
  - [The Commission on Dietetic Registration's GMCS Website](#)
  - [MQii Website](#)

# Further Considerations: How Do Hospitals Select Which Measures To Report?

---

## Hospital Performance on a Given Measure

Hospitals will select eCQMs on which they perform the best. The lack of a national benchmark creates variation in what is considered high performance.

## Relevance to a Hospital's Program and Priorities

Hospitals will select eCQMs that best align with their identity as a place of care (e.g., trauma center). These measures may also be where a hospital has the best performance.

## Burden of Reporting a Given Measure

Hospitals will select eCQMs that are less complex to capture and validate and can be easily extracted from their EHR. Hospitals often find themselves at the mercy of their EHR.

## System-Level Influence

Hospitals will select eCQMs that align with their system-wide initiatives across the care continuum. Hospitals may be influenced by the corporate or enterprise level in their selection of eCQMs.

The Academy's Business Case for GMCS webinar recordings can be found [here](#). To register for future Business Case for the GMCS webinars, please email [quality@eatright.org](mailto:quality@eatright.org).

eCQM: Electronic Clinical Quality Measure; EHR: Electronic Health Record; GMCS: Global Malnutrition Composite Score.



MALNUTRITION QUALITY  
IMPROVEMENT INITIATIVE

## Questions & Answers

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

# Questions About How to Best Prepare Your Hospital for eCQM Reporting

---

Can you provide examples on how to collect data and calculate each component and the GMCS?

What opportunities can dietitians have to become involved in the technology behind reporting, obtaining, and analyzing this data?

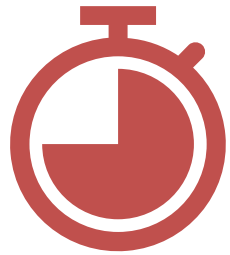
How can I create these reports to use for CQI for my department?

How to apply to a pediatric hospital? What tools are best to use in pediatric hospital setting?

Can the initial screening for risk of malnutrition be made by medical interns or medical students?

# Key Takeaways

---



Get started early

Make sure you  
have the right  
team



Engage your  
frontline  
clinicians