

# An in-depth overview of meaningful use for participating hospitals

## **Executive Summary**

Meaningful Use (MU) is the Center for Medicare and Medicaid Services' (CMS) most comprehensive and ambitious quality improvement program ever with significant benefits for all stakeholders. These include the potential to significantly improve patient care while streamlining processes and procedures and moving to complete electronic data storage—as well as providing lucrative reimbursements to hospitals that have fully participated in the program. At the same time, MU also presents participants with the most complex and stringent demands ever for a CMS program implementation and attestation.

Clearly, MU is here to stay, and hospitals of all sizes shortly will need to comply with the program to avoid significant financial penalties. The purpose of this whitepaper is to provide hospital staff with a guide to understanding MU from the ground up. From an over view of Core and Menu Measures to defining population groups and streamlining the switch to electronic data, this paper was designed to provide a thorough grounding in the fundamentals of MU as well as a blueprint for planning a successful MU EHR and attestation program from start to finish.

The depth and scope of information presented here goes far beyond what is generally available in other similar MU guides. It is meant to be an important tool to help hospital navigate the road to MU.

## Part I: Meaningful Use - An Overview

### I. Introduction

#### *The Ultimate Goal: Improving the Standard of Care*

Meaningful Use (MU) is the Center for Medicare and Medicaid Services' (CMS) most comprehensive, ambitious and complex healthcare quality enhancement program ever. The ultimate intent is to help every hospital improve its standard of patient care and to provide institutions with the highest quality data to support this effort.

According to CMS, MU's high level goals are to drive:

- Better clinical outcomes
- Improved population health outcomes
- Increased transparency and efficiency
- Empowered individuals
- More robust research data on health systems

#### *The Importance of Quality Data*

CMS recognizes that quality data plays a pivotal role in enhancing patient care. Further, it recognizes that the transition from manual to electronic medical records and reporting is key to enhancing data quality. MU was created to offer specific financial incentives to hospitals that implement government certified electronic medical record (EHR) systems and use them in ways that help improve care, support information exchange among caregivers and track quality measures. To receive incentives, hospitals must meet detailed CMS criteria demonstrating that their technology is being used meaningfully to achieve these goals. Hospitals are then required to formally attest on MU criteria to receive payments.

#### *Encouraging EHR Use*

CMS states that the goals of MU the program on a more granular level are to encourage use of EMR technology to:

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and family
- Improve care coordination, population and public health
- Maintain privacy and security of patient health information

### ***MU Reporting***

Reporting to the CMS on care quality and processes is nothing new. Hospitals have been reporting on similar measures to maintain accreditation for Medicare and Medicaid reimbursements since 2002. However, despite this, hospital scores in most areas have not met the level of improvement that CMS desired, even though the CMS' original National Hospital Quality Measurement program was focused on publicly reporting hospital comparisons based on the data submitted. CMS believes that one of the factors impacting quality may be related to the subjectivity of manual reporting. Therefore, it created MU reporting based on data stored as standard codes in discrete fields that can be electronically transmitted to the CMS directly from the EHR without interpretation. The belief is that once CMS data reporting and analysis are improved through this electronic submission, the quality of feedback to hospitals on performance will similarly improve. Better feedback will enable hospitals to implement workflow changes to elevate scores and patient care. Additionally, more feedback across institutions in an electronic format can also improve hospital data as part of a larger national pool used to analyze outcomes, revise guidelines and drive improved treatment protocols in healthcare facilities across the country. Therefore, a key MU goal is standardized reporting with a high level of detail and cross-institution consistency.

### ***Representing a Major Change for Hospitals***

When fully implemented, MU will be transformational. But, not surprisingly, achieving its goals requires enormous effort and a transformation of many of the quality reporting processes hospitals have had in place for decades. Recognizing this, MU introduces the demands of the program in graduated stages.

Eventually, much of MU attestation will focus on documenting that staff have followed best practice guidelines in treating cases. So in essence, if the data entry is focused on supporting the process of care, then as the healthcare clinicians proceed through EHR documentation, MU system implementation could be a tool that will actually guide hospital staff through the care process itself and serve as an interactive electronic checklist for delivering the highest standard of care. This is yet another major benefit.

As hospitals struggle with difficult MU demands, they can easily get caught up in the details of CMS reporting—focusing on reimbursements and penalties and viewing all this as an end in itself. In fact, in CMS interviews, hospitals and individual practices report that overwhelmingly in Stage 1, they focused first on technology and then on workflow. Hospitals, universally reported that for Stage 2 they intend to reverse the focus. In general, the key should be viewing MU as a broad opportunity to improve standards of patient care, outcomes and workflow processes. This requires attention to both the delivery of care and the precision and detail of documentation of that care.

## II. Stages and Schedule

The MU program itself dates back to 2009 when the Health Information Technology for Economic and Clinical Health (HITECH) Act enabled the Department of Health & Human Services (HHS) to implement initiatives to improve quality-of-care through the promotion of healthcare IT systems, including EHRs. The CMS introduced the Medicare & Medicaid EHR Incentive Program, commonly known as Meaningful Use, to achieve this goal.

### *Three Stages with Increasing Demands*

The MU program was launched in Fiscal Year 2011 with the first hospital participants starting to collect data in October of 2010. The program was based on the 2010 Federal Register Final Rule and was established as the 2011 version of the requirements. MU is being implemented in three stages with increasingly demanding requirements as participants progress through the program. CMS also retains the ability to add additional stages as time passes. All hospitals start by meeting the Stage 1 requirements for a 90-day period in their initial year and for a full year in their second year (except for those hospitals first attesting in 2013, which report only on 90 days' worth of data in 2014). After successfully meeting the requirements of Stage 1 for two years, hospitals must meet Stage 2 requirements for two complete years (except for 2014 when the attestation period is 90 days) and then Stage 3 for an additional two years. Currently, CMS has mapped out requirements through Stage 3.

The overall goals of Stage 1 focus less on showing quality-of-care and more on demonstrating the capabilities for appropriate digital EHR data capture and sharing. Stage 2 is aimed at advancing clinical processes through the EHR, while Stage 3 is aimed at improving outcomes.

The specific goals of each stage as detailed on CMS website appear below.

#### **STAGE 1:**

##### **Meaningful use criteria focus on:**

- Electronically capturing health information in a standardized format
- Using that information to track key clinical conditions
- Communicating that information for care coordination processes
- Initiating the reporting of clinical quality measures and public health information
- Using information to engage patients and their families in their care

#### **STAGE 2:**

##### **Meaningful use criteria focus on:**

- More rigorous health information exchange (HIE)
- Increased requirements for e-prescribing and incorporating lab results
- Electronic transmission of patient care summaries across multiple settings
- More patient-controlled data

#### **STAGE 3:**

##### **Meaningful use criteria focus on:**

- Improving quality, safety, and efficiency, leading to improved health outcomes
- Decision support for national high-priority conditions
- Patient access to self-management tools
- Access to comprehensive patient data through patient-centered HIE
- Improving population health

Experts estimate that on average, hospitals will receive about \$4 million each in MU reimbursements, and large single facilities may receive as much as \$12 million. Clearly, the rewards are substantial for hospitals successfully progressing through the program. Potential penalties for non-participation phased in during fiscal year 2015 can be substantial as well.

### ***Programs for Medicare and Medicaid Hospitals***

MU provides components for both Medicare and Medicaid hospitals. Facilities may apply under either and if eligible can receive funds through both.

Medicare-eligible hospitals include:

- “Subsection (d) hospitals” in the 50 states or DC that are paid under the Inpatient Prospective Payment System (IPPS)
- Critical Access Hospitals (CAHs)
- Medicare Advantage (MA-Affiliated) Hospitals

Medicaid-eligible hospitals include:

- Acute care hospitals (including CAHs and cancer hospitals) with at least 10% Medicaid patient volume
- Children’s hospitals (no Medicaid patient volume requirements)

Hospitals applying for both components should select Both Medicare and Medicaid during the initial MU registration process, even if planning to apply only for a Medicaid EHR incentive payment during the first year of participation. Dually eligible hospitals can then attest through CMS for their Medicare EHR incentive payment at a later date, if desired. But, they cannot make an addition to their initial eligibility declaration. All eligible hospitals and CAHs participate in the program based on the federal fiscal year, which ends on September 30, while eligible professionals have other deadlines.

### ***Incentives Give Way to Penalties***

Technically, MU participation is voluntary but, as noted above, shortly incentives for participation will give way to significant penalties for non-compliance. If a hospital does not successfully attest for MU during a single year (starting in FY 2013), it will not receive its market basket rate increase in yearly Medicare payments for the fiscal year two years later. This rate varies from year to year but 1.5% is a good rule of thumb for gauging the penalty effect. If the hospital is not successful in meeting the requirements in an incentive payment year, the incentive payment is not available, but the year counts as a payment year. Hospitals can only receive incentive payments for up to four years.

Hospitals fare better financially by initiating the program early because incentive payments decrease over time and will only be paid out for up to four years of successful participation. FY 2015 is the last year that hospitals can initiate participation in the incentive program with payments ending in FY 2016. Once a facility enrolls in MU, the program to some degree takes on a life of its own. As a hospital starts collecting data, it has a fixed window of time for reporting before facing a reduction in reimbursement. After successfully completing Stage I, hospitals need to immediately move on to Stage II to maximize reimbursements.

A comprehensive calendar chronicling all MU deadlines can be found here:

<http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/HIT-Programs-Timeline-2012-.pdf>

Therefore, while enrolling early in the program has advantages, hospitals must be ready to progress in the program to maximize reimbursements. This includes setting up an EHR to capture appropriate data, implementing the IT resources to extract data and creating reports, training staff on proper data input—and much more. And requirements only get more difficult with each stage.

### **III. Fundamental Changes in Reporting Standards**

Hospitals beginning to tackle MU must keep in mind how dramatically the program differs from all prior CMS reporting initiatives. In particular, MU involves:

- Full Electronic data capture and extraction. As noted, while implemented in stages, ultimately MU will require that all reports are not only delivered to CMS in electronic format but also include only electronic data elements taken directly from an EHR. Of course, what comes out electronically must also be input electronically. Therefore, MU represents a complete switch to a digital data format.
- Structured reporting. MU requires a new more structured information format based on standardized responses, similar to multiple choice tests. While hospitals may record information for internal use as they see fit, all information submitted to CMS for MU must follow this very specific structured format.
- Rigid and detailed data requirements. These new rigid information requirements mean diving deep into data to ferret out the all the specific, complex and detailed measures you will need to report to CMS. With complex ratios and numerous inclusions and exclusions, the format of the reports themselves is another difficult task to master.
- Ever-changing reporting requirements. Be aware CMS will be continuously fine-tuning, revising and updating its reporting guidelines to improve its own process over time. So hospitals will need to keep up with evolving standards on a regular basis to understand and implement changes.

### ***The problems with Manual Data Collection and Abstraction***

Now that advancing healthcare IT technologies have made digital data capture and reporting practical for most healthcare institutions, MU encourages a rapid shift to electronic data and EHR use to eliminate the problems inherent in manual data capture and abstraction as well as in the data's typically unstructured format.

Representative of manual data methods are SOAP (Subjective, Objective, Assessment and Planning) reporting, familiar to any nurse, as well as narrative charting of patient conditions and treatments. Without standardized language, such reporting is extremely user dependent. It rarely compels caretakers to chronicle the same measurements or even the same information across similar patient populations for any objective comparison of care. Further, it is highly subject to inaccuracy due to transcription errors and illegibility, difficult to share across clinicians both within and beyond the enterprise in a timely and efficient fashion and difficult to share with patients.

When it comes to abstraction, manual data is even more problematic. Traditionally, abstractors have reviewed large volumes of patient hard copy binders, often overflowing with forms, notes and treatment plans—all written in a variety of and written styles. This also leaves plenty of room for human error and individualized interpretation of review guidelines and the caregiver's reporting style. In addition, such abstraction processes lack consistency across individual abstractors. Locating required information in charts that do not conform to a common organizational structure can also be slow and frustrating.

This all adds up to the pivotal problems associated with manual data—lack of objectivity, consistency and scientific rigor. Additionally, the unstructured reporting standards typically associated with manual data means that it will not stand up to analysis to help drive hospital compliance and change management or the formulation of global evidence-based care guidelines.

### ***The Benefits of Electronic Data and EHR Systems***

Why is electronic data more valuable and reliable than manually collected data?

The well-acknowledged benefits of the electronic data and an EHR system include:

- Greater data accuracy due to minimization of human transcription errors.
- Ability to automate data abstraction.
- Increased ability to share information across hospitals and care settings.
- Access to data across hospitals nationwide.
- Enhanced timeliness of information enterprise-wide due to data access through the hospital IT system.
- Greater patient information access.

In turn, this timely and widely available electronic data supports:

- Better clinical decision making.
- Improved coordination of care across hospitals.
- Enhanced patient safety.
- Avoidance of redundant testing.
- Better use of clinical staff time
- Patient empowerment to participate in their own healthcare.

For MU, in particular, the ability to remove human subjectivity from the data abstraction process is of tremendous benefit in generating more consistent data for better analysis.

### ***The Move to Structured Data and Codified Reporting***

Perhaps the major benefit of electronic data collection is that it lends itself to structured rather than unstructured reporting far more than manual data collection. Structured data removes the problems associated with user-dependent reporting and abstraction and enables consistent cross-enterprise information gathering and analysis. Accordingly, MU will now require all records as structured data—familiar to everyone from their school days as the close cousin of a multiple choice test. Pick your answer A,B or C—nothing in between. Then in Stage 2 the move is from current structured responses to codified data fields. This means that going another step beyond basic standardization of the answer list to attach standard codes to each answer. Codes need not be visible to the user, but they must be contained in the EHR in order to be used for CMS electronic reporting.

Codified data enables implementation of sophisticated enterprise and government-based healthcare processes for developing and refining:

- Hospital performance reporting and benchmarking.
- Best Practice guidelines.
- Sophisticated Clinical Decision Support systems.
- Research on a wide range of clinical issues.

In short, codified data gets to the heart of MU.



## **Part II: Planning and Implementing a Meaningful Use Attestation Program**

### **I. Reviewing and Interpreting MU Specifications**

MU specifications are complex and ever-changing. Before launching any attestation efforts, hospital staff must read and interpret MU specifications from multiple entities, which are accessible on the CMS website, eSpec Navigator, Value Set Authority and the Federal Register. Also helpful are webinars, conference calls, and direct inquiries to CMS. Staff will need to keep apprised of MU updates also posted on the CMS website on an ongoing basis. Appointing a MU committee to take charge of this process is often helpful.

Debate and deliberation over MU specifications is not uncommon, especially relative to how the measures will be implemented and the potential impact on workflows. As is the case with much of the MU reporting process, many decisions must be made that involve not only IT personnel but also many hospital staff members, including quality improvement personnel and other clinical specialists.

### **II. The Nuts, Bolts and Decisions of Attestation**

For MU attestation, hospitals must report on and meet specified requirements, termed Measures involving EHR use, as well as Clinical Quality Measures (CQM)s. In addition to evolving over time, MU requirements change with the stage of the program. However, the general concepts behind them are expected to remain the same.

#### ***Measures and CQMs***

MU Measures are broken down into two groups—Core and Menu. Hospitals must meet all Core Measures and can select a designated number of Menu Measures from a list of choices.

Starting with the fiscal year 2014, both Stage 1 and Stage 2 have a set choice of mandatory Core and Menu indicators. Often, MU Measures involve meeting or exceeding a specific threshold for the qualifying number of cases treated or documented appropriately. Attestation involves creating a fraction with the total number of patient records that meet the requirements to be considered for the Measure as the denominator and number of patients with appropriate intervention or documentation as the numerator.

Currently in Stage 1, Stage 2 and likely beyond, hospitals must also report on CQMs. In fiscal year 2014, they must report on 16 CQMs from a choice of 29. Be aware that CQMs involve a complex and ever-changing array of exclusions and inclusions for both numerators and denominators that can dramatically affect results. Often, data elements from across the hospital and various EHR modules need to be reconciled to calculate the appropriate figures, so reports need to be configured and run very carefully.

### **Population Groups**

For fiscal year 2014 reporting, CMS offers hospitals a choice of two population groups for computing their data. The same group must be used across all Core and Menu Measures. The Observation Services Method includes patients admitted directly to inpatient departments, presenting to the ED (emergency department) and subsequently admitted, and treated in the ED with observation services. The All ED Visits Method adds patients treated and discharged directly from the ED to the Observation population.

Depending on the specific procedures implemented in the ED, figures reported for a particular Measure can vary dramatically based on population choice. For example, if CPOE is implemented both in the ED and across the hospital, compliance rate may be high in the ED because of the limited number of physicians included in the sampling. But, if the ED does not document smoking status consistently, hospitals may fall below the threshold on this measure when using the ED method. So hospital will be well served to weigh their options and make their population choices carefully.

### **Other Factors**

A hospital will have to make decisions on numerous other reporting factors that may affect attestation results. For example, if care that crosses departmental boundaries is being documented in multiple EHR fields, which entry will be counted in the report? Also focus on cases known as UTD's (unable to determine) that for reasons such as insufficient information—just one small seemingly unimportant missing field-- or improper coding do not clearly fit in a fraction. Hospitals should develop a system to root out and correct them to get credit in the calculation.

Also, remember that data must conform to rigid CMS standards. For example, Race and Ethnicity are two separate but related questions, and an EHR must be set up accordingly.

### **III. Programming an MU-Compliant EHR**

No EHR comes ready out-of-the-box for MU attestation and certainly not for the needs of a particular hospital. Managing this comprises a major part of the hospital's MU program. Once hospitals have made crucial decisions about the data to be included, as discussed above, the next major step is creating the EHR screens and prompts to ensure all the necessary data elements are captured. The most effective strategy for successful attestation is to plan the system with reporting in mind--remembering that the quality of the data that comes out of the EHR for reporting is only as good as the data that goes in.

### *Involve Both Quality and IT Staff*

Quality staff will typically devise the MU questions and answers, working hand in hand with IT personnel who develop the screen displays and later will have to map the resulting data fields to create the final reports. MU requires discreet, highly structured data elements in a specific format with little flexibility. So an EHR must deliver this information precisely as required.

If you have an existing EHR, begin by determining what required information is already in your system and revise data parameters as necessary. Likely, you will have to create a long list of additional structured questions and prompts, again paying close attention to the MU specifications. For example, just because a discharge prescription is actually sent electronically does not mean that the required evidence of this has been recorded in the EHR? It will not be, unless this is built into the screens or system themselves.

### *Consider Workflow and Strive for Clarity*

Whether for a new or existing system, design your screens to be intuitive and to support the user's workflow as well as the practice patterns and sequences of care within your organization. Make sure prompts for all required information are front and center on the monitor. Information accessible only through numerous clicks or relegated to the bottom of long screens will go unanswered. The structured data choice for responding to questions must be clear, concise and cover all possible scenarios. One of the most important issues in MU will be the potential positive impact of data input on patient care itself. In part, you are creating a de facto best practice guide for treating patients. So plan carefully!

## **IV. Training**

With changing data input requirements, generally, some form of training for clinical staff and physicians will be required. Training may take the form of presentations, face-to-face sessions, attending rounds with physicians, or memos and emails. The importance of compliance on the outcome of MU attestation must be emphasized. Follow-up training and compliance reinforcement may also be required.

## **V. Reporting - Codifying and Mapping Data**

Once the EHR is configured, the next crucial steps are the IT efforts surrounding report creation. Far more complicated than for any prior CMS reporting program, MU reporting involves several levels of data mapping, programming, and coding. To successfully accomplish this, the process often must involve Quality staff working together with the IT team.

The most difficult and time consuming step in the process is data mapping and coding. In part, this effort involves programming a sequence of complex SQL queries to extract all this information required for reporting from the EHR and then mapping it to the appropriate fields in the digital MU reporting system templates. IT must understand every data element needed from the EHR for attestation. For MEDITECH systems, the mapping also involves building queries to find data hidden in custom fields and text notes.

This process must be accomplished for every MU Objective and Measure being reported, keeping in mind that this data may reside in multiple EHR modules, adding to the complexity. IT staff will have to understand where this information resides, what department generated it and what module holds it.

A major part of reporting is factoring in the inclusions and exclusions for each Measure within the code to match the specification. For a single MU indicator, more than 170 lines of code may be devoted simply to managing all inclusions and exclusions. Obviously, if this coding is not correct, the report risks inaccuracies and failure to follow the technicalities of CMS specifications.

### ***Testing, Validation and Dry Runs***

Once reports have been built, they must be tested and validated to ensure each data element and code supports MU requirements. Unfortunately, initially report data often fails to meet certain thresholds. This means that the cycle must begin again. Staff must determine whether there is a problem with hospital workflow, with caregivers incorrectly entering information, or simply with the computerized data collection and report analysis. IT staff must often devote significant staff to addressing and correcting problems and then retesting reports. This often becomes a cyclical process that can last up to three months or more. Eventually, however, most hospitals that have progressed this far do persevere and attest.

But bear in mind, as hospital progress through MU's various stages, existing data elements and standardized coding will be altered and new items added. So the process also repeats itself throughout each stage.

## **VI. Documenting Processes for a Potential Audit**

Audits do happen-- and audit preparation is, in fact, required to qualify for MU reimbursements. CMS estimates that 1/10 to 1/5 of all MU program participants will be audited and has developed a pre-and post-attestation audit process. Documentation of MU decisions, rule compliance and the process overall are required for an audit. Currently, the most common reasons for failing an audit are noncompliance with the requirement for EHR security risk assessment and failure to document yes or no responses in the attestation

process. Thus far, documentation of the EHR denominators and numerators appears to be correctly reported.

The audit process requires proof of ownership of an MU certified EHR (CEHRT), identification of the reporting method used to incorporate ED patients (All ED Visits or Observation Services methods) for the Core and Menu Measures, a copy of the reports used to enter attestation data, documentation for all the yes attestation measures and evidence that the measure was actually met.

Most discussions about how to prepare for an audit begin by suggesting that hospital retain the following in electronic format or hard copy binders:

- Certification certificates and numbers for system and any modules
- Actual attestation documents and receipts from the attestation process
- EHR reports with attestations for each Core and Quality Measure
- Documentation for public health registries (confirmation emails of data received and other correspondence)
- Statement about system change and source code control that documents the Clinical Decision Support Rules and other functionality enabled for the reporting period (drug/allergy checking, etc.)
- Documentation of any hospital specific interpretations for measures
- Documentation that all appropriate records were included for the quality and MU measures

This documentation is substantial and needs to be stored and managed appropriately, remembering that it is Protected Health Information (PHI). Hospitals must plan for and meet these additional data requirements as they manage the process through each stage of MU.

## **CONCLUSION**

MU is an ambitious and complex program with significant benefits and challenges for all hospitals. Staff involved in MU attestation must understand the program in depth before planning and implementing and EHR and attestation. They should also have a clear understanding of the multiple decisions and steps involved in successful attestation and the timeframes involved. Following, attestation, staff must also keep apprised of CMS' ongoing MU changes. However, once a hospital has successfully attested and implemented an effort to keep current of the changing MU landscape they will have entered the next phase of performance improvement.