

December 4, 2009

Demonstrating Meaningful Use of Health IT for 2011 and Beyond

The goal of the American Recovery and Reinvestment Act of 2009 (ARRA) health information technology (IT) investments¹ is to foster rapid-cycle adoption and meaningful use of health IT to stimulate the economy, improve health, and slow the growth in health care costs for the nation. The near-term strategies for measuring and demonstrating meaningful use must chart a purposeful and compelling path towards this goal.

The Department of Health and Human Services (HHS) has a critical opportunity to set clear priorities that will foster the adoption of health IT to demonstrably improve the quality and cost-effectiveness of care. The process to demonstrate meaningful use can engage patients, build capacity for quality improvement, lower administrative burdens on providers and patients, and, if done strategically and in service of these goals, send a clear market signal that the focus is on using technology to improve care.

Our recommendations for measuring and demonstrating meaningful use address these goals, building from key foundational principles outlined in our prior collective [comments](#)² on meaningful use.

Foundational Principles for Demonstrating Meaningful Use

- **Prioritize “measures that matter” for health improvement**—measures that demonstrate improved health outcomes and greater cost-effectiveness.
- **Be operationally feasible for 2011 and beyond for a broad range of providers, vendors and the Centers for Medicare and Medicaid Services (CMS).** This will mean a phased approach with expectations and rigor of methods becoming more precise and exacting over time. The approach will

¹ ARRA provides financial incentives for meaningful use of qualified health IT systems by providers.

² Available online at http://www.markle.org/downloadable_assets/20090626_CollabCmtONC.pdf.

account for variability in the capacity and capabilities of systems and providers while improving the usefulness, integrity and comparability of information over time.

- **Leverage existing quality reporting efforts if they meet these criteria and work in alignment toward meaningful use goals.**
- **Implement processes that will proactively improve data quality and data integrity over time.**
- **Minimize unnecessary burden and cost by enabling reporting of “measures that matter” as a byproduct of using qualified health information technology.** Providers should be able to easily submit data to demonstrate meaningful use without significant additional overhead and effort.
- **Give providers timely access to the quality and cost information they need to improve care.** Demonstrating meaningful use should help providers and patients improve health and health outcomes, and not just be a time-consuming administrative data reporting or documentation exercise.

Key Recommendations for Measuring and Validating Meaningful Use

1. **Adopt clear and compelling health and efficiency goals for health IT investments through ARRA.** The Achievable Vision for 2015,³ proposed to the Health IT Policy Committee, is an excellent starting point that designates ambitious goals for these investments:
 - a million heart attacks and strokes prevented
 - heart disease no longer the leading cause of death in the US
 - 50% fewer preventable medication errors
 - the racial/ethnic gap in diabetes control halved
 - preventable hospitalizations and re-admissions cut by 50%
 - all patients have access to their own health information
 - all health departments have timely awareness of outbreaks
2. **Prioritize meaningful use measures by their potential impact on these objectives, and require providers to electronically report summary statistics for prioritized measures to CMS.** The best hope for achieving the 2015 goals will be to lay out specific, implementable measures that drive towards measurable health improvement and efficiency gains. Reporting should consist of a simple ratio or “summary statistic” for each measure (e.g., the percent of a provider’s hypertensive patients with controlled blood pressure).

A set of illustrative, prioritized measures might include:

- percent of hospitalized patients with a 30-day readmission/preventable hospitalizations and emergency department visits
- percent of patients with appropriate and up-to-date preventive screening and vaccinations
- percent of smokers offered smoking cessation counseling

³ See “Meaningful Use Workgroup update” for June 16, 2009 meeting of the HIT Policy Committee at the following URL:
http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_10741_873878_0_0_18/June%2016%202009%20MU%20Final_508.ppt

- percent of patients with recorded BMI
- percent of patients where clinical summary has been shared with patients and with other providers for care transitions
- percent of patients who have access to personal health information electronically
- percent of hypertensive patients with BP under control
- percent of diabetic patients with A1C under control
- percent of patients at high risk for cardiac events on aspirin prophylaxis
- percent of patients aged 65+ who are taking high-risk medications

The prioritized measures are outcome-oriented, requiring progressive use of clinical information for reporting. Measures based solely on administrative claims or that are dependent on manual compilation of results risk creating extra burdens without corresponding value.

It is critical to focus on outcomes that are meaningful to providers and indicate measurable health improvement and efficiency gains. Selected measures should allow all providers/specialties to participate—whether through measures unique to particular specialties or cross-cutting items that could reasonably apply to a wider range of providers (e.g., those for whom more-targeted measures are not feasible in the near term). Appendix A⁴ illustrates how some of the measures proposed by the Health IT Policy Committee might capture a subset of providers, while driving concrete improvements in care. While the early focus of meaningful use should be on priority primary care providers and high priority conditions, including pediatricians, mechanisms must be developed to enable medical and surgical specialists to adopt and meaningfully use EHRs in a manner that addresses their core competencies and is relevant to their patients and practices. For these groups, a focus on patient engagement, patient safety and care coordination could provide great value.

3. **Adopt a phased implementation approach to improve data quality, test interfaces and spur the development of reporting capabilities in electronic systems.** Successful implementation of meaningful use will depend on making required standards as simple, low-cost, and broadly implementable as possible, recognizing the need for an iterative approach to learn from what works

⁴ The table is meant to illustrate this point with several examples, but it is neither comprehensive nor intended to be definitive.

and what doesn't. The process should be guided by the key principles recommended by the Implementation Workgroup of the HHS Health IT Standards Committee⁵ to guide adoption of health IT standards, including:

- Keep it simple.
- Don't let "perfect" be the enemy of "good enough".
- Keep the implementation cost as low as possible.
- Design for the little guy.
- Position quality measures so they motivate standards adoption.
- Support implementers.

4. This approach must be translated into a clear path leading to 2015 strategic objectives.

Proposed Strategic Timeline and Plan:

- A. 2011: Providers will attest they have calculated and viewed summary statistics for their patient population, have made sure these results are being calculated accurately, and have tested their system's ability to report summary statistics to CMS. These attestations would be subject to audit.**

The year 2011 will serve as a critical starting place for providers, assuring that they:

- know how their summary statistics are calculated
- can calculate them accurately, either directly or with an intermediary, and are aware of baseline statistics
- have successfully tested mechanisms for sending results to CMS

It will also give CMS critical experience and feedback to improve specifications for calculating and transmitting summary statistics.

⁵ See "Implementation Workgroup Update & Review of Adoption Experience Hearing" Presentation for November 19, 2009 meeting of the Health IT Standards Committee Meeting at the following URL: http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_11673_909257_0_0_18/ChopraImplementationWGUpdate.ppt

CMS will provide standards and detailed guidance for calculating and transmitting summary statistics well before 2011, so system capabilities can be developed and tested as part of the certification process. It will also be critical to test that systems are operating correctly, that information is captured accurately, and that summary statistics can be submitted to CMS once systems are actually implemented. Vendors and regional extension centers will work with providers to train them in use of systems and identify and correct problems with extracting appropriate data for summary statistics calculation.

In 2011, providers will be required to successfully complete summary statistics submission to CMS for at least one measure. CMS will test its ability to accept these statistics and give providers prompt feedback (see Recommendation #7). Providers who are already capable of transmitting more comprehensive summary statistics should do so in 2011, providing an important set of early data and feedback for CMS.

B. 2012: Providers will calculate and transmit summary statistics to CMS, reporting the full range of measures at regular reporting intervals.

In 2012, providers can use a range of mechanisms for calculating and transmitting summary statistics to CMS, including provider-selected intermediaries and PQRI registries that draw from electronic health information systems. This will speed initial implementation and support demonstration of meaningful use by existing mechanisms. These intermediaries can serve as hubs for compiling and reporting summary statistics while electronic systems in use by providers develop needed capabilities.

By 2013, qualified technologies should be able to calculate and transmit summary statistics for providers. Calculation of measures and transmission capabilities should be embedded in electronic systems, requiring minimal additional work for providers and allowing them to report summary statistics as a byproduct of using qualified health IT. Quality improvement will depend on providers' ability to assess meaningful use measures and results for their patients on a regular basis

and use this information to improve care processes and consumer engagement, so they don't need to rely on costly intermediaries.

- 5. Systems must be able to support providers' needs for information to meet meaningful use goals. The underlying objective is to put useful information into the hands of providers and patients to improve care, and not to create a compliance exercise.**

System requirements for “qualified technologies” must give providers the capabilities to calculate how individuals and groups of patients are doing based on actual clinical information at the point of care and longitudinally, so that the information can drive process and care improvements, as well as actively engaging patients as partners in planning and managing their care. Clinicians should be able to visualize the data they report and compare it with benchmarks as well as look at and assess patient-specific information and trends. Electronic systems will also need to support basic registry functions to trend populations of patients, easy-to-use mechanisms providers can use to populate specialty or chronic care registries or share information electronically with consumers or other providers, and tools to support the myriad reporting requirements providers face: including to public health agencies for reportable conditions and to support board certification.

It will be critical to foster innovation for how electronic systems organize, display and share detailed patient information in dashboards, decision alerts, clinical summaries and population health management tools for provider and patient use. But these tools and approaches do not need to be standardized. What does need to become more “conforming” and standardized over time are the elements and methods (if not mechanics) for how summary statistics are calculated and reported to CMS.

- 6. CMS will need to implement basic interfaces to accept summary statistics from each provider.** They need this summary information to assess meaningful use, measure trends and track progress, but do not need to collect granular patient-level data to accomplish these objectives.

Today, the systems used by CMS for performance reporting have neither the capacity nor the flexibility to receive summary results directly from most IT systems. Thus, an immediate priority is the implementation of the simpler

interfaces needed for the acceptance of summary statistics (rather than patient-level data).

Mechanisms are already in place to accept summary statistics from PQRI registries, and these capabilities can be built on, expanded and improved. The interfaces can enable physicians in diverse care-delivery and data-sharing arrangements (e.g., between physicians and health plans, registries, HIEs, regional collaboratives, integrated delivery systems, etc.) to upload their results as a “secondary process” to the use of the information for care improvement. It should be possible for groups of physicians working together to improve care quality and safety to report collectively rather than as single providers.

Qualified systems will need to develop the capacity to calculate and transmit summary statistics. This does not preclude CMS from using an intermediary to accept and compile summary statistics for CMS’ own use, if this can help meet the objectives of timely feedback and payment to providers without imposing additional costs or burdens on them.

7. **CMS should feed information in a timely way back to providers, including relevant benchmarks and whether meaningful use is achieved.** Methods will need to be developed and tested for CMS’ prompt feedback to providers regarding:

- receipt of summary statistics submitted
- achievement of meaningful use
- prompt payment when meaningful use is achieved
- improvement since last reporting period
- local and national performance benchmarks

CMS will need to be able to track provider-specific performance across various quality improvement initiatives, including ARRA meaningful use. CMS may also want to consider the relative benefits and risks of assessing meaningful use in a “pass/fail” manner or paying partial incentives for meeting some but not all of the requirements, especially in 2011.

8. **Steps to align meaningful use and other quality improvement efforts, including PQRI, must be taken to reduce burden and create focus.**

For instance, electronically reporting quality results for meaningful use could be deemed to satisfy PQRI reporting requirements. CMS could begin accepting

summary statistics (and not underlying patient-specific information) reported from EHRs for both PQRI and meaningful use efforts. Requiring submission of summary statistics only, and not identified data or data at the individual patient level, would prevent exposure of personally identifiable health information and protect patient privacy.

9. **Measures should be defined and specified as simply as possible at the start, moving to greater specificity and rigor over time.** Specification of the precise numerators and denominators to be used in summary statistics, the standards for how they will be calculated, transmitted and accepted, and the underlying process requirements, must be clearly defined and tested in iterative cycles.

However, there is simply not yet enough experience with these standards and measures or an understanding of how they will perform in practice. Therefore a phased approach is recommended.

CMS should use the initial year to work with a broad range of provider sites to test and refine proposed standards, including how best to capture structured data from a variety of systems and calculate and report summary statistics. This iterative piloting, testing and learning process will reveal what works and is implementable across a wide variety of settings and technologies, resulting in more refined, rigorous and usable standards for implementation by 2012, when providers will begin reporting summary statistics.

10. **It should be possible to test and validate data quality starting in 2011 without increasing overhead or administrative burden.** Data quality can be addressed without requiring that a third party check every reported result against the underlying data. Other strategies to handle data quality and accuracy include:

- Require that qualified systems have mechanisms to calculate and test meaningful use performance on a routine basis before formal reporting occurs. Providers can use these tools to proactively identify and address both data quality (e.g., “I am not entering data in the right field or measures are not being calculated accurately”) and care quality problems (e.g., “the share of my hypertensive patients with blood pressure in control is still low”).

- Review and test systems' data workflows, measure definitions and mechanisms to recreate source data for reported results as part of the certification process.
- Extensive field testing of data quality and reporting interfaces in the first year of program implementation, as described above.
- Periodic audits for data accuracy (via CMS, individual states, Recovery Audit Contractors).

Appendix A:

Sample of Potential Priority Measures Demonstrating Meaningful Use of Health IT, by Illustrative Specialty and Clinical Priority⁶

Clinical Priorities	Performance Measures	Illustrative Specialties to Which Identified Measures May Be Applicable						
		Primary Care	Cardiology	Ob/Gyn	Allergy Pulmonology	Diabetology	Endocrinology	Surgery
Population Health/ Preventive Care	<ul style="list-style-type: none"> • % of eligible patients receiving screenings for breast and colon cancer • % of children with up-to-date immunization status • % of eligible patients receiving flu vaccine • % of patients with recorded BMI • % of smokers offered tobacco cessation counseling 	✓	✓	✓	✓	✓	✓	✓

⁶ This chart highlights measures from the final recommendations of the Health IT Policy Committee to the National Coordinator that focus on quality and efficiency outcomes and are appropriate for direct reporting of summary statistics (numerator and denominator) from electronic systems. Other measures, such as the percent of patients with access to educational resources or percent of patients with access to personal health information electronically, are equally important and should be captured but may not be initially reported from qualified systems. A check mark indicates that the broad category of measures, although not necessarily each of the specific measures shown, can apply to providers indicated. “Primary care” includes internists, family practice physicians and pediatricians.

Clinical Priorities	Performance Measures	Illustrative Specialties to Which Identified Measures May Be Applicable						
		Primary Care	Cardiology	Ob/Gyn	Allergy Pulmonology	Diabetology Endocrinology	Surgery	
	Measures demonstrating “meaningful use” of HIT in achieving improved outcomes through patient-centered care							
Heart Disease	<ul style="list-style-type: none"> • % of eligible patients with LDL in control • % of patients at high-risk for cardiac events on aspirin prophylaxis • % of eligible patients with blood pressure in control 	✓	✓	✓	✓	✓		
Diabetes	<ul style="list-style-type: none"> • % of eligible patients with LDL in control • % of eligible patients with A1C in control • % of eligible patients with blood pressure in control 	✓	✓	✓	✓	✓		
Orthopedic Conditions	<ul style="list-style-type: none"> • Inappropriate use of imaging (e.g., MRI for acute low-back pain) 	✓						
Surgical Conditions	<ul style="list-style-type: none"> • % of eligible surgical patients who receive VTE prophylaxis 							✓

Clinical Priorities	Performance Measures	Illustrative Specialties to Which Identified Measures May Be Applicable					
	Measures demonstrating “meaningful use” of HIT in achieving improved outcomes through patient-centered care	Primary Care	Cardiology	Ob/Gyn	Allergy Pulmonology	Diabetology Endocrinology	Surgery
Medication Management	<ul style="list-style-type: none"> • % of elderly on high-risk medications 	✓	✓	✓	✓	✓	✓
Care Coordination	<ul style="list-style-type: none"> • % of encounters where medication reconciliation performed • 30-day readmission rates • Potentially preventable hospitalizations and emergency department visits • Clinical care summaries shared with patients and with other providers for care transitions 	✓	✓	✓	✓	✓	✓

December 4, 2009

These comments are jointly submitted by
the Markle Foundation, the Center for American Progress,
the Engelberg Center for Health Care Reform at Brookings,
and the following additional supporters.

(as of December 4, 2009)

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