

Office of the National Coordinator
Health IT Policy Committee
Quality Measures Workgroup
Panel 2: Technology (EHR), Measure, and Guideline Developers

Submitted by:
Mark D. Stewart, MPH
Science & Medicine Advisor
American Heart Association

May 19, 2011

Thank you for the opportunity to present today on behalf of the American Heart Association and its division, the American Stroke Association (AHA/ASA). We are headquartered in Dallas, TX and have offices nationwide. With our more than 20 million supporters and volunteers, both professional and lay, we are considered a trusted and credible source for science and for quality improvement. I will briefly describe our work in the clinical practice guideline and quality measures arena and then provide answers to the specific questions posed for today's Panel.

The American Heart Association/American Stroke Association, along with the American College of Cardiology Foundation (ACCF) and other partners, has been developing clinical practice guidelines for more than 20 years. During this long history, this collaboration has included the development of a rigorous methodology^{i,ii}. This methodology was recently highlighted in Appendix D of the recent Institute of Medicine's report on Developing Trustworthy Clinical Practice Guidelinesⁱⁱⁱ. The ACCF/AHA collaboration on guidelines forms the foundation for the development of performance measure sets^{iv,v}, which are, when appropriate, drafted in conjunction with the American Medical Association's Physician Consortium for Performance Improvement (AMA PCPI). Most recently, we have collaborated on the development of key data elements and definitions of a base cardiovascular vocabulary for electronic health records, which will be published on June 6, 2011.

In addition to the collaboration on this clinical guidance, the AHA has developed, implemented and manages national registries aiming to ensure that patients with cardiovascular disease and stroke are consistently treated according to the most recent evidence-based guidelines. The Get With The Guidelines (GWTG) program is the largest national hospital-based program dedicated to quality of care improvement for patients with cardiovascular disease. The objectives of the GWTG program are to:

- Improve care and education of patients hospitalized with CVD and Stroke
- Accelerate initiation of the evidence-based, guideline-recommended therapies in appropriate patients without contraindications
- Enhance management of comorbidities and related risks
- Facilitate coordination of care, transitions of care and outpatient follow-up

The five major quality improvement programs that make up the Get With The Guidelines (GWTG) suite (<http://www.heart.org/quality>) are:

- Get With The Guidelines-Heart Failure
Get With The Guidelines-Stroke

- Get With The Guidelines-Resuscitation, formerly known as National Registry on Cardiopulmonary Resuscitation (NRCPR)
Action Registry-Get With The Guidelines (AR-G)
The Guideline Advantage™ (TGA)

All five of these programs help ensure consistent application of the most recent American Heart Association/American Stroke Association scientific guidelines for patient treatment and provide feedback on practices and patient outcomes. GWTG-Heart Failure, Stroke and Resuscitation are three in-hospital quality improvement programs. The Action Registry-Get With The Guidelines is a joint registry combining Get With The Guidelines-Coronary Artery Disease and the ACC's National Cardiovascular Data Registry (NCDR) for acute myocardial infarction (both Non-ST-Elevation Myocardial Infarction (NSTEMI) and ST-Elevation Myocardial Infarction (STEMI)). The Guideline Advantage™ is a joint venture of the American Heart Association with the American Cancer Society (ACS) and American Diabetes Association (ADA). This ambulatory registry will provide guidance on treating and preventing 4 of the top 10 leading causes of death in the U.S.

Our Focus on Quality-related portfolio also includes three national quality improvement initiatives, Mission:Lifeline, Target:Stroke and Target:Heart Failure.

Mission: Lifeline® is a national, community-based initiative to improve systems of care for patients with STEMI. The program focuses on streamlining and coordinating processes to help speed the delivery of appropriate treatment from the time of symptom onset.

Target: Stroke was built on the success of previous national QI initiatives to implement systems-based interventions to reduce door to reperfusion times for STEMI patients. Target: Stroke was created to help achieve door-to-needle (DTN) times of 60 minutes or less for patients with acute ischemic stroke.

Our updated Target:Heart Failure is taking a new approach focused on the common factors that contribute to costly re-hospitalizations for patients with heart failure, an area of keen interest and concern for the Centers for Medicare and Medicaid Services (CMS).

Question 1: What standards have enabled implementation of MU1 quality measures?

The Guideline Advantage™ works directly through participating practices' established electronic health records (EHRs) or health technology platforms to receive data necessary to generate measures and reports. We have noticed that a number of EHRs and EHR modules have begun to capture data for the e-measures specified in MU as a result of code sets specified.

With respect to The Guideline Advantage™, we have incorporated 34 of the 45 e-measures into our data specifications. Not all e-measures are relevant for our program, such as those targeting pediatric populations. Our early program adopters are, to date, not submitting complete data to enable us to calculate on the e-measures. We are working with our program participants to help them understand what data would need to be captured to make this possible.

Question 2: Explain the challenges and strengths of current e-specified clinical quality measures and the impact on your product development?

2a. What are the challenges for encoding the electronic specifications?

2b. What are the challenges of data mapping of clinical processes to data elements in the EHR? (i.e. to achieve numerator and denominator counts)

The parties who develop the EHR elements and the parties who develop performance measures are two distinct groups. To the extent that these efforts could be combined (i.e., those who construct EHR data elements were involved in performance measurement development or vice versa), synchronicity would be improved. The ACCF/AHA Task Force on Performance Measures has codified the processes used to define ideal, measurable performance measures. In an effort to assist with standardization, the ACCF/AHA Task Force on Data Standards has developed key data elements and definitions of a base cardiovascular vocabulary.

Furthermore, the different code sets included in the measure specifications are updated at different times throughout the year by code set developer (e.g., SNOMED, CPT) and measure developers (e.g., AHA). It would be useful to have guidance on how often the measure developer will need to update the specifications, and how much time the EHR will have to integrate these changes.

Question 3: What can we do to improve the existing standards to optimize clinical quality measurement and reporting?

Data elements that comprise quality measure data sets should be defined in a standard way to enable health IT developers to implement them effectively. Measure developers should provide standard definitions for the data elements necessary to construct proposed measures and end-users must agree to use these elements consistently. We also believe that it is important to cross check the e-measures with manually abstracted measures (at least initially) to determine if there are any potential inconsistencies with the e-measure. Currently, there is insufficient data to determine if these e-measures will render the same type of data as the manually abstracted measures since e-measures are limited to code sets. We believe that this is important to ensure that the numerator and denominator are correctly crafted.

We would also recommend that not only the e-measures be reported on, but also a set of data elements. It may be helpful for providers to be able to see how their numbers look for specific data elements, in addition to just the measure. Finally, we would also recommend that at a minimum reports be generated on a quarterly basis to allow providers/practices to more rapidly address those areas where their performance scores are low.

Question 4: What standards are needed to develop innovative or novel measures that take advantage of embedded information within your EHR, for example measures that are longitudinal, cross-setting, or patient reported outcomes?

Measures that are longitudinal as well as cross-cutting measures are important to further patient care. However, there are a number of barriers that currently exist for their use. Patients may change physicians, or change insurers. Those patients who have chronic conditions may see multiple physicians. It is therefore important to provide the ability for information to be shared seamlessly across providers and care settings. However in order to achieve this end, it is necessary to have some method by which to identify a patient irrespective of care setting or provider. While there are concerns with using a unique and constant patient identifier, systems will need to be developed to allow a patient's progress to be evaluated longitudinally. In some circumstances, this may require the use of special

procedures, but it is likely that solutions can be found. For the majority of patients, conventional identifiers, such as or akin to the social security number, may suffice.

With regards to patient-reported outcomes, we believe that these may hold value, especially if they include assessments of symptoms using well-defined terms. Also, the ability to improve quality of care is dependent on the adherence of the patient to recommendations made by the provider. Assessment of adherence should be taken into consideration when implementing e-measures under a value based purchasing model.

Question 5: In light of the importance of increasing the number of valid electronic clinical quality measures, how do you plan to gain greater efficiency for future product development in this area?

Standardization (or harmonization) of data elements used to generate measurement would be beneficial to the system. The more disparate the elements and/or sets are, the more challenging it will be to evaluate the performance of the system. Taking The Guideline Advantage™ as an example, this joint venture between three major health organizations (ACS/ADA/AHA), representing four major disease states combines all pertinent measures for all four diseases. Each set taken separately would be burdensome, but this collaboration across disease states (and organizations) allows for efficiencies by breaking down silos. Working together is better than working separately to measure what is important for each individual disease state given the multiple comorbidities present in the U.S. patient population. The extent to which performance measure developers can go to this next layer of organization with the support of EHR vendors or systems will be important in creating maximally usable systems.

Question 6: How are you adapting your product to support end users in quality improvement?

The modules contained in the suite of AHA/ASA in-hospital registries described previously (including GWTG-Heart Failure, GWTG-Stroke, GWTG-Resuscitation, and ACTION Registry-GWTG) collect a number of critical measures and provide hospitals and physician groups with quarterly reports (and additional on-demand reports) that allow them to continually assess their performance compared to national benchmark data. We have expanded the disease entities covered by these registries, and we provide important end-user support in the field to enhance the ability of organizations to accomplish the goals they set. This includes additional quality improvement resources, including access to rationale/logic, guidelines/statements, real time logic checks, coding instructions, and webinars. We also encourage attainment and maintenance of high benchmarks with a highly desirable recognition program.

The Guideline Advantage™, our outpatient registry and quality improvement program, also has the ability to produce quarterly reports for sites that benchmark their performance on a series of measures and compare them to other practices. We believe that frequent reports are important to ensure that sites can identify which quality measures they need to improve on. This allows practices to meet as a team and determine what type of changes must be instituted in order to improve their quality of care. In addition to providing quarterly reports, we also offer a number of educational webinars and problem-solving approaches. As an additional incentive, The Guideline Advantage™ will include a recognition program that recognizes practices for their quality improvement efforts and accomplishments.

Both our inpatient and outpatient modules are updated on a bi-annual basis to ensure that the latest guidelines/measures are integrated into the modules. With regards to the inpatient module, we update the rationale/logic document, logic checks, and coding instructions as well. Both inpatient and outpatient modules are supported by webinars to discuss changes made to the programs, to inform users and allow them to ask questions regarding those changes.

Question 7: What role do clinical quality measures play in informing development of practice guidelines or clinical decision support rules?

The ACCF/AHA Task Force on Practice Guidelines methodology is a rigorous, evidence-based approach to determine the estimate of certainty (precision) of treatment effect (i.e., Level of Evidence) and the size of the treatment effect (i.e., Class of Recommendation). Guideline recommendations are based on the best available evidence, preferably randomized, placebo-controlled clinical trials including multiple population strata. The performance and quality measures used in our quality improvement programs are derived from the most essential and measurable of these recommendations after a formal development process. Recognizing this process, we currently attempt to develop practice guidelines in a manner that facilitates their subsequent use in quality measure development, but this is currently a work in process. Our clinical practice guidelines are not currently based on the evaluation of quality measures in practice, but it is possible that after analysis and peer-reviewed publication, some aspects of performance measurement could be used to better inform guideline development.

Question 8: What is required for a flexible, adaptive, technology environment to speed up the process of incorporating measures that reflect clinical guidelines?

It would be beneficial for measure developers to have a forum in which to discuss with the details and functionality of e-measure specification development. This would allow measure developers to share lessons learned and avoid pitfalls related to e-measure development, testing and validation. The development of one version of a measure, rather than 3-4 versions, would be preferable because variation challenges EHR vendors and creates confusion on the practice side. The American Heart Association would be pleased to collaborate with the ONC to help facilitate such consensus on alignment of current measures and development of future measures. HHS should encourage the facile sharing of data between EHR developers and vendors and measure developers. This data is needed in order for measure developers to be able to test the reliability and validity of measures as they proceed from being included as a reporting measure to being elevated to a quality or performance measure. Careful analysis is needed before a measure developer can bring a measure to the National Quality Forum for potential review and consideration for endorsement. Without easy access to this data, the ability to generate and test the validity of measures will be impaired, resulting in slower e-measure development and integration into national initiatives.

ⁱ Gibbons RJ, Smith S, Antman EM. The American College of Cardiology/American Heart Association Clinical Practice Guidelines: Part I: Where Do They Come From? *Circulation*. 2003;107:2979–2986.

ⁱⁱ Gibbons RJ, Smith, Jr, SC; Antman EM. American College of Cardiology/American Heart Association Clinical Practice Guidelines: Part II : Evolutionary Changes in a Continuous Quality Improvement Project. *Circulation*. 2003;107:3101-3107.

ⁱⁱⁱ IOM (Institute of Medicine). 2011. *Clinical Practice Guidelines We Can Trust*. Washington, DC: The National Academies Press.

^{iv} Spertus JA, Eagle KA, Krumholz HM, Mitchell KR, Normand ST. ACC/AHA methodology for the selection and creation of performance measures for quantifying the quality of cardiovascular care: a report of the ACC/AHA Task Force on Performance Measures. *Circulation* 2005;111:1703–1712.

^v Spertus JA, Bonow RO, Chan P, Diamond GA, Drozda JP Jr, Kaul S, Krumholz HM, Masoudi FA, Normand S-LT, Peterson ED, Radford MJ, Rumsfeld JS. ACCF/AHA new insights into the methodology of performance measurement: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures. *Circulation*. 2010;122:2091–2106.