A New Era for Clinical Quality Measurement Data: Standardization, Automation of Clinical Quality Measurement and Reporting

By Lisa Brooks Taylor, RHIA

Set on course by the National Quality Strategy (NQS) and fueled by the "meaningful use" EHR Incentive Program, clinical quality measurement is entering a new era. A primary objective of the NQS, which was developed by a multistakeholder collaboration convened by the National Quality Forum and funded by the Agency for Healthcare Research and Quality, is to build a national consensus on how to measure quality so that stakeholders can align their efforts for maximum results.[1]

It is commonly recognized that this will require replacing the burdensome, costly, and labor-intensive chart abstraction methodology of clinical quality measures with automated extraction and electronic reporting directly from electronic health records (EHRs).

Quality Measure Resources and Tools

Organizations such as the NQF and Health Level Seven (HL7) have been developing tools and standards to accomplish this automated chart abstraction. These organizations welcome open, transparent, consensus-building participation from stakeholders across all industry sectors in achieving this effort.

The Quality Data Model (QDM) was developed with the support of NQF and funding from the US Department of Health and Human Services. It is a model to represent the data elements with metadata of clinical quality measures and supports the consistent capture of clinical data and the ability to share that data electronically.[2]

A data element is represented as a:

- Category: diagnosis, procedure, medication, laboratory test
- Data type: active/inactive, ordered, administered, performed
- Attribute: category-specific attributes, data flow attributes

When developing clinical quality measures, developers must designate standard code sets or terminologies with a specific list of codes for the category of a data element. These are called "value sets." Examples of a few standard code sets and terminologies currently in use within clinical quality measures include: ICD-CM, CPT, HCPCs, SNOMED CT, LOINC, and RxNorm. A quality measure will have many data elements, each with a value set. A value set may incorporate multiple standard code sets or terminologies.

In addition to the Quality Data Model, the web-based Measure Authoring Tool was developed by NQF. This tool is used by measure developers to write the quality measures so they may be distributed electronically to and read by an EHR.

The product of the Measure Authoring Tool is an eMeasure that expresses the data elements and logic of the measure in the Health Quality Measure Format (HQMF). The HQMF standard is a messaging standard developed by the HL7 Structured Documents Workgroup. The workgroup has also developed the Quality Reporting Document Architecture (QRDA) standard for communicating quality measure results electronically from EHRs.

Two implementation guides for QRDA have been developed. QRDA Category I is used for an EHR to electronically message a data report of an individual record that fulfills the requirements of a quality measure. QRDA Category III is used by an EHR to message and electronically report the aggregated results of a quality measure. The QRDA Category II implementation

guide has yet to be developed. It will be used to electronically report and message a list of the records that comprise the aggregated results of a quality measure.

Of note to HIM professionals assisting with EHR implementations, clinical documentation improvement programs, and quality measurement reporting are the differences in requirements for stage 1 and stage 2 meaningful use attestation. Stage 1 required EHRs to use either ICD-9-CM or SNOMED CT to maintain an up-to-date problem list of current and active diagnoses. Stage 2 requires the use of SNOMED CT.

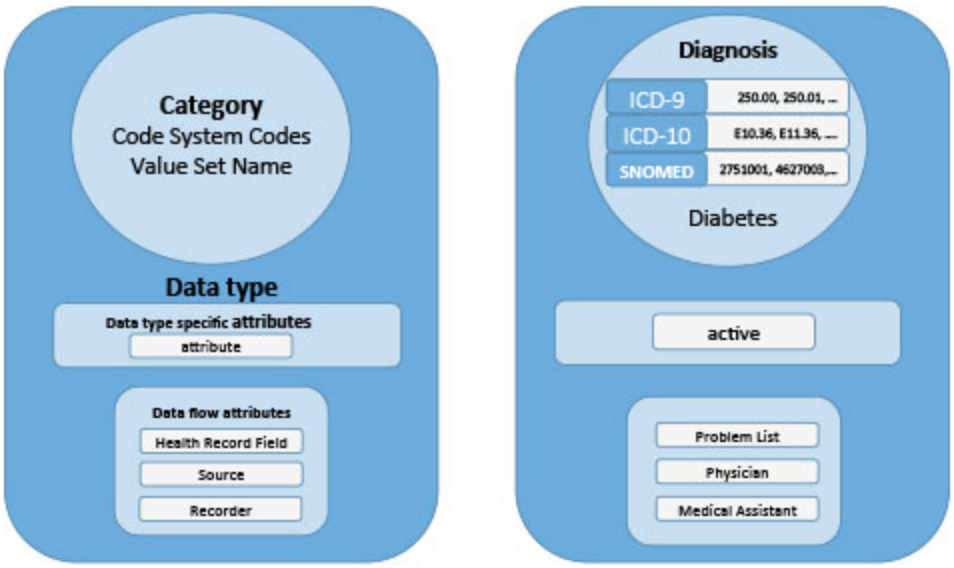
eMeasure logic references the problem list to identify patients with active conditions that are used to include or exclude patients from a measure. HIM professionals will want to review with their EHR vendors to ensure the EHR accurately automates the assignment of SNOMED CT codes for conditions documented in the problem list. Particular attention to governance of the problem list is prudent.

Questions to consider include:

- Who is responsible for documenting and maintaining the problem list?
- What are the policies and procedures for quality oversight?
- Where does the accountability for quality measure results reside in the organization?

Chart abstraction of clinical quality measures is a complex human task. With data elements defined using the Quality Data Model, clinical quality measure logic expressed as eMeasures, and results messaged electronically via QRDA reports, the standardization and automation of clinical quality measurement and reporting has begun. HIM professionals will want to work closely with EHR vendors, clinicians, clinical documentation improvement specialists, and the quality reporting team to ensure the appropriate capture of clinical data and the accuracy of eMeasure results.

Components of a Quality Data Element



Source: National Quality Forum. "Quality Data Model." June 2012. http://www.qualityforum.org/QualityDataModel.aspx#t=2&s=&p=1%7C.

Notes

1. HHS. "2012 Annual Progress Report to Congress: National Strategy for Quality Improvement in Health Care." 2012. http://www.ahrq.gov/workingforquality/nqs/nqs2012annlrpt.pdf.

2. National Quality Forum. "Quality Data Model." December 2012. http://www.qualityforum.org/QualityDataModel.aspx#t=2&s=&p=3|otnote%202.

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