Embracing CAC Beyond Reimbursement Initiatives

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A key theme for the healthcare industry in 2012 has been embracing technology, and people have begun practicing what they preach. Computer-assisted coding (CAC)-with natural language processing (NLP) or natural language understanding (NLU) capabilities-will soon be integrated into the coding workflow of every organization. The challenge for health information management (HIM) is to leverage the technology by demonstrating its value and championing its use for additional purposes.

One area to consider using CAC is in chart abstraction. The demand on organizations to abstract clinical data for registries and quality measure reporting continues to expand. These tasks often involve costly manual abstraction of data in a time of limited budgets. A system that provides a core data source enabled by technical assistance for collection of required data and use for many other purposes is in the HIM professional's future.

It will come as no surprise to HIM professionals that the fiscal health of hospitals and the scope and quality of patient care and physician practice patterns are directly intertwined. As organizations struggle to remain compliant with an ever increasing and often confusing landscape of regulatory and reporting requirements, they are also competing for a dwindling share of reimbursement revenue.

As requirements increase, the resources often remain static. Leveraging available tools and processes to capture and analyze data proactively, and thus predict their clinical and financial outcomes, will position organizations to remain both solvent and competitive. Adopting a "collect once, use many times" approach to record processing and reviews will yield broad benefits.

Vendors Promise Data Abstraction, Aggregation

One of the promises of EHRs is the automation of abstraction and aggregation of results for quality measurement and reporting-but much work remains. Most in the industry acknowledge it is challenging to "retool" existing measures to be "machine readable and processable" with results comparable to human abstraction. One automation obstacle is identification and abstraction of data from "free text" or "narrative text," which is referred to as "unstructured data." There is growing recognition that natural language processing is a useful technology to address unstructured data.

Clinical quality measures require identification of patients with a condition, typically expressed as a diagnosis code, followed by review of the records to ensure a specific intervention was performed, a medication was prescribed/administered, a lab test was performed, or a procedure was performed according to evidence-based medicine guidelines. The measures are written to gather and aggregate data retrospectively after patient discharge. The data is reported and often used for comparison purposes by consumers and payers. The HIM professional should consider how CAC can be integrated into the measurement process to validate results of the manual abstraction and data aggregation prior to reporting.

Many CAC Uses Beyond Reimbursement Initiatives

On October 1, 2012, Medicare ushered in a historic change in reimbursement with the value-based purchasing initiative, transitioning from a "pay-for-reporting" to "pay-for-performance" model. Value-based purchasing raises the reimbursement bar to unprecedented heights by combining both the hospital's and the patient's perception of the care received to determine performance and financial rewards. This is accomplished by evaluating performance in two domains, and involves 12 inpatient process measures that are hospital-driven and eight patient care experience measures (HCAHPS) scores that are consumer-driven. Upon calculation of performance, the Centers for Medicare and Medicaid Services is mandated to distribute available funds (1 percent of base operating DRG reduction for 2013) amongst all participating hospitals.

The HIM professional may choose a prospective approach to quality measurement by promoting the value of using CAC for concurrent coding that identifies patients whose data will be aggregated into measure results. Concurrent identification of patients can be used to trigger clinical documentation improvement activities, clinical decision support tools, and quality measure processes while the patient is in-house-thereby improving patient outcomes and measurable results. HIM leaders will advocate for CAC and the "collect once, use many times" approach in order to break down silos within the organization, automate quality measurement, and bring value to the organization.

Quality Initiatives that Could Leverage Computer-Assisted Coding Systems

NQF	Quality Data Model (QDM)	Information model that clearly defines concepts used in quality measures and clinical care, intended to enable automation of electronic health record (EHR) use
HL7	Healthcare Quality Measure Format (HQMF)	"eMeasure Format" standard for representing a quality measure's structure, metadata, definitions, and logic in an EHR-readable/processable format
NQF	Measure Authoring Tool (MAT)	Publicly available, web-based tool for measures developers to create eMeasures
HL7	Quality Reporting Data Architecture (QRDA)	Standard that defines the way quality measurement data and results should be structured to create interoperability between reporting and receiving systems

Several Agencies Promoting CAC

Today the National Quality Forum (NQF) and Health Level Seven (HL7), with the support of the Agency for Healthcare Research and Quality (AHRQ) and the Office of the National Coordinator for Health IT (ONC), are leading the development of technologies for automated quality measurement and reporting from EHRs. Their work has included the Quality Data Model (QDM), Measure Authoring Tool (MAT), Healthcare Quality Measure Format (HQMF), and Quality Reporting Data Architecture (QRDA). ONC will continue to identify criteria and standards for the "meaningful use" EHR Incentive Program to ensure the progression of automation of quality measurement and reporting.

The NQF and HL7 organizations use consensus development processes resulting in well-accepted tools, standards, and implementation guides. The work requires volunteers and feedback, and HIM involvement is integral. Demonstration of emerging technologies such as CAC/NLP combined with processes to automate quality measurement and reporting will contribute to the development of robust EHRs and health information exchange.

Coding professionals are recognizing the need for the HIM profession to increase proficiency in additional terminologies and classification systems. Visionaries will be working with their vendors to drive the CAC/NLP capabilities to accommodate additional terminologies and classifications such as LOINC, SNOMED CT, and RxNorm, which are also used in quality measures.

HIM Foundations Critical for CAC Use

As the nation strives to meet the goals of the national quality strategy, HIM principles are foundational for supporting timely, accurate, and complete data collection, appropriate release of data, and the transformation of data into information. HIM professionals will lead information governance and ensure data integrity through the management of all types of data and

across the continuum of stakeholder groups. The HIM professional's role is to combine emerging technologies with innovative processes to meet the aims of this strategy-improve the quality of healthcare, improve the health of the US population, and reduce the cost of quality healthcare.

HIM professionals have a responsibility to help foster the transformation of data collection in new and innovative ways. Computer-assisted coding is an example of innovation to improve productivity and consistency of encoded data. This technology provides the opportunity for HIM professionals to drive the adoption of tools that turn information into new and strategic assets.

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