The Health Data Analyst's To-Do List: Demand for Analytics Fueled by ARRA, PPACA, and ICD-10

By Linda Hyde, RHIA

In October 2008 a *Journal* article titled "HIM Jobs of Tomorrow" profiled 11 new and revised jobs representing changes in HIM.[1] One of the jobs highlighted was health data analyst.

Data analysis is not a new role in HIM, but it has been evolving appreciably. In the two years since the article was published, the healthcare industry has seen increasing potential for data analytics, with greater emphasis on electronic collection, exchange, and reporting of healthcare data.

The healthcare reform provisions within ARRA and the Patient Protection and Affordable Health Care Act (PPACA) are providing the regulatory requirements and funding to significantly increase the amount and type of healthcare data available for analysis. The ultimate goal of these acts is to improve access, patient safety, outcomes, and efficiency of the healthcare system.

Achieving this goal will require data that measure the effectiveness of the programs and evaluate the quality of patient care delivered.

The transition to ICD-10-CM/PCS will create additional analytic challenges, including translating and applying ICD-9-CM to ICD-10 and vice versa.

These initiatives require that organizations collect health information in a structured format, use that information to track key clinical conditions, link or exchange data between laboratory information systems, link quality measurement data to reimbursement, and bridge the ICD-9-CM and ICD-10 data sets.

Meaningful Use and PPACA

In July the Centers for Medicare and Medicaid Services (CMS) issued the meaningful use final rule. The rule implements ARRA provisions to provide incentive payments to eligible professionals (EPs), eligible hospitals, and critical access hospitals that successfully demonstrate meaningful use of certified EHR technology.[2] The final rule establishes the criteria for a phased approach that demonstrates meaningful use of EHR technology consistent with current available technology and capabilities.

Eligible providers can take advantage of these incentives using the final stage 1 meaningful use criteria as early as 2011.

The focus of stage 1 is the electronic collection of health information in a structured format, use of that information to track key clinical conditions, and communicating this information to coordinate care. Stage 1 requirements also include reporting clinical quality measures and public health information.

Complying with the criteria will require that the EHR technology being used has the capability to capture the data and produce the measures required by CMS to demonstrate it.

One common objective for EPs, eligible hospitals, and critical access hospitals is incorporating clinical lab test results into the EHR as structured data. This will require linking or exchanging data between laboratory information systems and the EHR, including establishing data standards for populating the test information to the right patient and handling corrections and updates.

Organizations must determine that all data are present for a patient and ensure that coded values are correct (such as lab units of measure) and are available as standard values or can be mapped to standard values. All these areas will require

understanding how to organize and represent this data and the ways to analyze its completeness and consistency. Demonstrating compliance with this objective will require submitting a measurement that shows that more than 40 percent of all clinical lab tests in a negative/positive or numerical format are incorporated in the EHR.

Understanding what data will be needed to obtain this measurement and ensuring that they can be correctly validated is an example of the types of analytics that will be needed.

Another meaningful use criterion is demonstrating an EHR's ability to support the reporting of clinical quality measures. Eligible hospitals and critical access hospitals will be required to report on 15 measures to meet stage 1 compliance.

One example, Stroke 3-Ischemic Stroke-Anticoagulation for A-Fib/Flutter, uses both SNOMED CT and RxNorm values to identify the various elements that make up the numerator, denominator, and exclusion statements. Other measures use LOINC codes to identify specific laboratory tests.

It will be extremely important for analysts to be able to validate that all conditions are being captured correctly, ensure that the EHR is able to derive and export the measure calculations, and explain to users how the data are captured.

PPACA introduces a number of requirements to link quality measurement data to reimbursement for different provider settings such as long-term care, rehabilitation, and hospice. It also includes requirements for the collection and analysis of data to understand health disparities and the establishment of a patient-centered outcomes research institute.

Ultimately the implementation of the PPACA provisions and meaningful use's increasing focus on use of computerized physician order entry and data capture in structured formats in stages 2 and 3 will expand health information exchange across different provider settings. This will enable organizations to examine patient outcomes and processes across the continuum of care in ways never before possible on such a broad scale.

The potential to identify and improve access to care and population health will open up another avenue for those individuals with expertise in health data analytics.

The CHDA Credential

In 2008 AHIMA launched the Certified Health Data Analysis credential for eligible professionals performing data analytics. Individuals who earn the CHDA designation achieve recognition of their expertise in health data analysis and validation of their mastery of this domain. The certification covers three major domains: data management, data analytics, and data reporting, all of which are fundamental to data analysts.

The certification provides practitioners with the knowledge to acquire, manage, analyze, interpret, and transform data into accurate, consistent, and timely information, while balancing the "big picture" strategic vision with day-to-day details. CHDA-credentialed professionals exhibit broad organizational knowledge and the ability to communicate with individuals and groups at multiple levels, both internal and external.

For more information on the CHDA, visit www.ahima.org/certification/chda.aspx.

The ICD-10-CM/PCS Transition

During the time that regulations and incentives promote more robust EHR capabilities, quality measurement reporting, and health information exchange, the industry will be transitioning to a new classification system.

The conversion to ICD-10-CM/PCS in October 2013 will create additional analytic challenges. Skilled analysts will be needed to bridge data sets between ICD-9-CM and ICD-10, understand the differences in patient populations and the implications for trending data, and compare measures across the two systems.

The increased specificity in ICD-10-CM/PCS also offers opportunities to create more robust measures of care, especially when linked with structured data from EHRs, such as laboratory results, vital signs, and medication usage.

The possibilities for health data analyst roles are wide open. Technical skills are important, but they need to be combined with a thorough understanding of the data.

Knowing how health data are collected, defined, represented, stored, and extracted becomes increasingly important in an electronic environment because the availability of this data will lead to more requests for information, exchanges across organizations, and reporting requirements.

This is the right time for those with HIM backgrounds and expertise to provide these skills and demonstrate our commitment to AHIMA's vision of "Quality Healthcare through Quality Information."

Notes

1. Dimick, Chris. "HIM Jobs of Tomorrow." *Journal of AHIMA* 79, no. 10 (Oct. 2008): 26–34.
2. Department of Health and Human Services, Centers for Medicare and Medicaid Services. "Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Final Rule." *Federal Register* 75, no. 144 (July 28, 2010). Available online at http://edocket.access.gpo.gov/2010/pdf/2010-17207.pdf.

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