Vision 2006 Brings Data Quality Management into View

Save to myBoK

by Bonnie Cassidy, MPA, RRA

One of the goals of the Vision 2006 initiative has been to identify new career opportunities for HIM professionals. Recently, a group of AHIMA volunteers has provided a framework and tools for developing data quality management expertise. Here's an overview of their work and a look at resources for those who want to learn more.

The healthcare industry has undergone extraordinary change, and more change is expected. Technology is rapidly changing how healthcare information is managed. The health information management (HIM) profession, at the crossroads of healthcare and information management, is profoundly affected by all of these changes.

In 1996, AHIMA's Board of Directors created Vision 2006 -- a picture of HIM roles for the next century -- to foster professional debate and proactively guide our profession's transformation. By envisioning the HIM profession of the future, AHIMA can help its members take advantage of new opportunities and take ownership of their career advancement.

To create a plan to place members at the forefront of the profession, the Board considered social and demographic, healthcare industry, information systems, work force, and organization and management trends as predicted by experts. From this information and the trends identified, new HIM functions emerged -- including that of data quality management (DQM).

An Idea Whose Time Has Come

Thanks to computer-based technology, the healthcare industry has seen unprecedented opportunities to capture data for patient care, utilization, and financial decision making. A number of initiatives prove the growth of efforts to capture outcome data, including:

- the Joint Commission on Accreditation of Healthcare Organizations' ORYX
- the proposed home health data set known as Outcomes and Assessment Information Set (OASIS)
- the Minimum Data Set (MDS) for long term care
- the National Committee for Quality Assurance's (NCQA) Health Plan Employer Data and Information Set (HEDIS)

All of these data sets draw on data as raw material for research, comparing patients and institutions. In addition, facilities are using data internally to monitor performance improvement efforts and to improve outcomes, and they will be using data comparatively among themselves as benchmarks.

An unfortunate byproduct can occur when healthcare organizations make considerable investments in computer software, hardware, and data collection efforts, only to find that once the data are analyzed, the information is unreliable and unsupportable. To avoid this pitfall, healthcare organizations must invest not only in the technology that produces the information but in the people with the skills to manage it.

AHIMA's Data Quality Management Task Force

To better identify data quality-related opportunities, AHIMA organized a volunteer task force in April 1997. The group was composed of "pioneers" with DQM expertise who could provide insight, identify opportunities, and make recommendations for development of DQM role-specific products and services. The work of the Data Quality Management Task Force would integrate with that of other volunteer groups to ensure integrated approaches toward the creation of professional development opportunities for current and future HIM professionals.

Their specific goals were to:

- describe skills and knowledge requirements for Vision 2006 roles
- craft simple assessment tools
- recommend professional development approaches that offer initial training to all interested members

The Data Quality Management Task Force members were Bonnie Cassidy, MPA, RRA, chairperson; Susan Fenton, MBA, RRA; Doreen Koch, ART; Margaret Stewart, RRA, board liaison; Valerie Watzlaf, PhD, RRA; Sue Willner, RRA; and AHIMA staff member Donna Fletcher, MPA, RRA.

Defining Data Quality Management

After an extensive literature search, it became clear that there was no clear industry definition for DQM. At this point the task force faced its most significant challenge: to define data quality management -- the processes leading to the outcome of quality data. After much discussion, the task force reached its conclusion: Good data quality management is the result of coordinated efforts to ensure that integrity is maintained in all of its components, including data application, data collection, data warehousing, and data analysis.

AHIMA's Data Quality Management Model illustrates these concepts, which are supported with detailed information described in the DQM table. The model is generic and adaptable to any care setting and for any application.

The DQM domains or functions illustrated in the model are:

- data application -- The purpose for which the data are collected
- data collection -- The process by which data elements are accumulated
- data warehousing -- Processes and systems used to archive data and data journals
- data analysis -- The process of translating data into information utilized for an application

The Right Stuff: Data Quality Manager Skills

Applied statistics
Data quality/integrity measurement
Database management
Healthcare finance concepts
Leadership
Outcomes analysis
Personal computer applications
Process analysis
Project management
Research and benchmark project design
Operations management
Personal effectiveness

Within each domain, the characteristics of data integrity to be ensured are:

- data accuracy -- Data are the correct values and are valid
- data accessibility -- Data items should be easily obtainable and legal to collect
- data comprehensiveness‹All required data items are included. Ensure that the entire scope of the data is collected and document intentional limitations
- data consistency -- The value of the data should be reliable and the same across applications
- data currency -- The data should be up to date. A datum value is up to date if it is current for a specific point in time. It is outdated if it was current at some preceding time yet incorrect at a later time
- data definition -- Clear definitions should be provided so that current and future data users will know what the data mean. Each data element should have clear meaning and acceptable values
- data granularity -- The attributes and values of data should be defined at the correct level of detail
- data precision -- Data values should be just large enough to support the application or process
- data relevancy -- The data are meaningful to the performance of the process or application for which they are collected
- data timeliness -- Timeliness is determined by how the data are being used and their context

Preliminary feedback indicates the model has been well received. For example, during AHIMA's 1997 National Convention, a group of data quality managers met informally. They gave positive feedback concerning the model and the task force's work to date. In addition, AHIMA president Margaret Stewart, RRA, and task force member Susan Fenton, MBA, RRA, presented "Building Data Quality into Your Data Repository" during the February 1998 HIMSS Conference and again received positive feedback.

Based on this model, the task force has identified DQM customers, data quality manager skills, potential work settings for data quality managers, and products needed to aid HIM professionals' transition into DQM roles.

How HIM Professionals Can Build Expertise

Traditionally, healthcare data quality practices have been department-based, using paper records, and have been coordinated by HIM professionals. These practices have evolved and now use data elements, electronic searches, comparative or shared databases, data repositories, and performance improvement techniques. Data quality management functions involve continuous quality improvement for data quality throughout the enterprise and may include data application, collection, analysis, and warehousing.

Consequently, data quality management functions are not new to HIM professionals; in fact, they build on their expertise and knowledge. As custodians of medical records, HIM professionals have historically performed warehousing functions, including purging, indexing, and editing data on all types of media: paper, images, optical disk computer disk microfilm, and CD-ROM. In addition, HIM professionals are experts in collecting data using classification systems such as ICD-9-CM, CPT, severity of illness, and registries. Further, HIM professionals have encouraged and fostered the use of data by ensuring its timely availability, coordinating its collection, and analyzing and reporting collected data. The Data Quality Management Task Force considered this HIM experience and expertise along with the future roles in the creation of the Data Quality Management Model. The group has also compiled a list of important skills for HIM professionals moving into data quality management roles.

What the Future Holds

Although the work of the task force has been completed, the work of AHIMA members at large is just beginning.

Professional growth ultimately relies on personal initiative. AHIMA's task force has provided the framework and some tools for developing data quality management expertise (see "Where to Learn More"). The work completed by AHIMA volunteer committees and staff will build on that framework. We challenge AHIMA members to enable our work to live on through your efforts as well.

References

AHIMA. "Inventing the Future: Vision 2006 -- The Vision Continues." Brochure. Chicago, IL: AHIMA, 1996.

Fletcher, Donna M. "No Fool's Gold: Guarantee Riches from Your Data Mine." *Healthcare Informatics* 14, no. 10 (1997): 115-118.

Johns, Merida L. *Information Management for Health Professions.* Albany, NY: Delmar Publishers, 1996.

For additional information on this topic:

- Where to Learn More: Data Quality Management Resources (below)
- Maximizing Data Quality of the Minimum Data Set

Where to Learn More: Data Quality Management Resources

Practice Briefs in the *Journal of AHIMA*

- "A Checklist to Assess Data Quality Management Efforts" (March 1998) outlines basic tenets in data quality management for healthcare professionals to follow. The checklist can be used to assess overall data quality management efforts within an organization or enterprise or for an application
- "Designing a Data Collection Process" (May 1998) describes factors to consider when constructing the data collection instrument for a new application (or use) of data
- "Data Quality Management Model" (June 1998) includes a description of data quality functions as they relate to the characteristics of data integrity and examples of each characteristic within each function. The graphic is designed to adapt to any care setting or application

Related Practice Briefs

- "Data Quality" (February 1996)

- "Developing Information Capture Tools" (March 1997)
- "Master Patient (Person) Index (MPI) Recommended Core Data Elements" (July/August 1997)
- "Merging Master Patient (Person) Indexes (MPI)" (September 1997)
- "Maintenance of Master Patient (Person) Index (MPI) -- Single Site or Enterprise" (October 1997)

Recent *Journal of AHIMA* Issues Dedicated to Clinical Data Management

- February 1997
- June 1997
- July/August 1997
- June 1998

Other Resources

- Fletcher, Donna M. "No Fool's Gold: Guarantee Riches from Your Data Mine." *Healthcare Informatics* 14, no. 10 (1997): 115-118.
- Fletcher, Donna M. "Destination Data: Data Quality Management Key to Organizing Information." *Healthcare Informatics* 15, no. 2 (1998).
- Johns, Merida. "Managing Data Quality." Chap. 7 in *Information Management for Health Professions.* Albany, NY: Delmar Publishers, 1996.

AHIMA Resolution
The Data Quality Management Task force submitted a resolution titled "Improving the Quality of Healthcare Data" to the 1997 House of Delegates, which was approved. It was published as an insert in the January 1998 issue of the *Journal of AHIMA.*

Online Assistance
Visit Communities of Practice, to participate in the Data Quality Management Discussion Forums.

Bonnie Cassidy *is a senior manager at Ernst & Young, Atlanta, GA. She served as chair of AHIMA's Data Quality Management Task Force.*

Article citation:
Cassidy, Bonnie. "Vision 2006 Brings Data Quality Management into View." *Journal of AHIMA* 69, no.6 (1998): 28-31.
