Statement on
Quality Healthcare Data and Information
Reviewed and Approved December 2007

AHIMA's Position

Healthcare data and its transformation into meaningful information should be a central concern for consumers, healthcare providers, the healthcare industry, and the government. Standards, technologies, education, and research are required to capture, use, and maintain accurate healthcare data and facilitate the transition from paper to electronic systems.

AHIMA Calls for the Following Actions:

- Develop and implement standards for data content, data mapping, and documentation within the healthcare industry.
- Implement continuous quality improvement strategies to support quality data and information.
- Research issues surrounding data variability to quantify their impact and identify solutions.
- Design application technology that supports collection of high-quality data at the point of care, data aggregation, exchange, and retrieval.
- Educate consumers regarding their role in ensuring the quality of healthcare data.

Rationale

Improving the quality of data, information, and knowledge in the U.S. healthcare system is paramount as we transition from paper to electronic health records. Many errors and adverse incidents in healthcare occur as a result of poor data and information. [1] In addition to threatening patient safety, poor data quality increases healthcare costs and inhibits health information exchange, research, and performance measurement initiatives. [3, 4]

Everyone involved with documenting or using health information is responsible for its quality. According to AHIMA's Data Quality Management Model[2], there are four key processes for data:

- Application—The purpose for which the data are collected
- Collection—The processes by which data elements are accumulated
- Warehousing—The processes and systems used to store and maintain data and data journals
- Analysis—The process of translating data into information utilized for an application

These processes are evaluated with regard to 10 different data characteristics:

- Accuracy—Ensure data are the correct values, valid, and attached to the correct patient record.
- Accessibility—Data items should be easily obtainable and legal to access with strong protections and controls built into the process.
- Comprehensiveness—All required data items are included. Ensure that the entire scope of the data is collected and document intentional limitations.
- Consistency—The value of the data should be reliable and the same across applications.
- Currency—The data should be up to date.
- 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.
- Granularity—The attributes and values of data should be defined at the correct level of detail.
- Precision—Data values should be just large enough to support the application or process.
- Relevancy—The data are meaningful to the performance of the process or application for which they are collected.
- Timeliness—Timeliness is determined by how the data are being used and their context.

Unfortunately, the quality of data within an individual organization is essential, but not sufficient. Healthcare enterprises are tasked with integrating multiple systems which may operate according to this data quality model; however, they do not have the ability to share data between applications within the enterprise. Enterprise integration requires a metadata approach with specified enterprise data standards. In addition, the healthcare industry is now facing data interoperability issues between enterprises, requiring universally accepted data standards, such as those being developed by a variety of standards development organizations (e.g., HL7, ASTM, etc.).

Healthcare quality and safety require that the right information be available at the right time to support patient care and health system management decisions. Gaining consensus on essential data content and documentation standards is a necessary prerequisite for high-quality data in the interconnected healthcare system of the future. Further, continuous quality management of data standards and content is key to ensuring that information is useable and actionable.

Notes

1. Institute of Medicine. *To Err is Human: Building a Safer Health System*. Washington, DC: National Academy Press, 2000.

2. AHIMA Data Quality Management Task Force. “Practice Brief: Data Quality Management Model.” *Journal of AHIMA* 69, no. 6 (1998): p. 2-7 of insert before p. 73.

3. AHIMA e-HIM Workgroup on EHR Data Content. “Data Standard Time: Data Content Standardization and the HIM Role.” *Journal of AHIMA* 77, no. 1 (2006): 26-32.

4. Crerand, William J., et al. “Building Data Quality into Clinical Trials.” *Journal of AHIMA* 73, no. 10 (2002): 44ff.