Data Quality Management: Every Health Information Manager's Business

by Linda Kloss, RRA, AHIMA executive vice president/CEO

This issue of the *Journal of AHIMA* does more than feature articles of timely importance to HIM practice. It actually contributes to the advancement of the field by presenting a model for an important dimension of HIM practice: data quality management. The practice brief in this issue ("Issue: Data Quality Management Model", *Journal of AHIMA*, June 1998) provides you with a framework for managing each of the characteristics of quality healthcare data across the data management continuum.

We are grateful to the members of the Data Quality Management Task Force, one of seven groups organized to study emerging Vision 2006 roles: Bonnie Cassidy, MPA, RRA, chairperson; Susan Fenton, MBA, RRA; Doreen Koch, ART; Margaret Stewart, RRA, board liaison; Valerie Watzlaf, PhD, RRA; and Sue Willner, RRA; supported by Donna Fletcher, MPA, RRA, of the AHIMA staff. Bonnie Cassidy describes the work of the task force in "Vision 2006 Brings Data Quality Management into View."

Like any other type of quality, data quality is no accident. It is the result of well-designed and well-executed information management processes. We have no quantifiable measures (or standards, for that matter) for healthcare data quality today in the US. We don't know if it is getting better or getting worse. The available research is often a byproduct of research on another topic that contains some footnote or caveat to the effect that the quality of the data may have biased research results. Information management practices have not highlighted data quality as an essential information management process—until now.

Healthcare data quality management refers to the reliability of coded data. It refers to the completeness of data on past medical history available to the primary care provider when the patient sits on the examining table. It also refers to the validity of data captured from electronic physiologic monitoring and the data maintained in specialty registries or sent to the state data agency. The model shows us that data quality management includes all of these dimensions and encompasses all stages of information management, from application design through data analysis. Data quality management cuts across all essential HIM functions and is—or should be—a core competency of HIM professionals working in all roles and capacities.

An Iceberg (or Opportunity)

I have resisted using this analogy for months, but the tug is just too great now. Data quality is the iceberg of our health information infrastructure. Its dimensions are huge, and they go largely unrecognized and unmeasured. When users lack confidence in the accuracy of the data and its reliability and impact on results cannot be demonstrated, any point being proven is dead in the water. We are spending billions to acquire systems, but we are spending very little indeed to understand and improve the quality of data in those systems.

It is interesting to note that much of the published research on data quality comes from European researchers. A thorough search of the literature for the past five years revealed that Europe is out-studying (or out-publishing) the US on the topic of data quality 2 to 1. Overall, the literature is embarrassingly sparse.

However, there is robust literature in the US regarding managing data quality in clinical trials, which requires an extremely high level of precision. Clinical trial research offers little tolerance for error, making it cost effective to invest in measurement. For this reason, we invited Christine Collins to contribute to this issue. Her article, "Ensuring Data Quality in the Pharmaceutical Industry," provides a glimpse of the rigorousness with which data quality is managed in clinical trials. (The article might also prompt you to consider whether the pharmaceutical industry, a growing venue for health information managers, might offer interesting career opportunities.)

Another area that has been studied in the US is the coding of diagnoses, principal and secondary, and procedures. In the past 20 years, several major studies have shown the steady improvement in the accuracy of ICD-9-CM data. Surely DRGs have had a lot to do with securing the resources necessary to improve coding processes.[1] Despite dramatic improvements in the past two decades, Green and Wintfeld note that residual error can have major consequence. They demonstrate the difficulty of distinguishing genuine differences—say, in effectiveness of care—from coding-induced differences. Along with good process design, data quality management requires an understanding of quantitative measurement. Daniel Lorence provides a refresher in "An Introduction to Benchmarking Health Assessment and Outcomes through Applied Statistics."

The Benefits of a Model

Systemic improvement requires system-wide effort, as Walter Bisbee and Debra Harris Lillback demonstrate in "Designing the Integrated Multidisciplinary Record Review." This article provides a step-by-step description of what it takes to impact institution-wide practices that drive the quality of documentation. The Data Quality Management Model presents a framework for design of data quality measurement and management processes. Ideally, we would be able to tackle all dimensions, but in reality, we will most likely have to build comprehensive programs piece by piece. The model gives us a goal and a road map.

We know that it will take enlightened senior managers to understand that one must manage data quality and that this will require resources. We are getting the message out to the industry. To that end, we congratulate Donna Fletcher, who published an article in *Healthcare Informatics* earlier this year, describing the model and its importance.[2]

In 1994, Watzlaf and Saul noted that "health information management professionals...demonstrate their emerging roles of data quality analyst, integrator of databases, and disseminator of electronic health care information."[3] With publication of the Data Quality Management Model, we take an important step as a profession. Now, the challenge is yours to use the model, share the results, and publish what you learn. We can and must create the body of professional literature on this important topic in the years ahead.

Notes

1. Green, J., and N. Wintfeld. "How Accurate are Discharge Data for Evaluating Effectiveness of Care?" *Medical Care* 31, no. 8 (1993): 719-731.

2. Fletcher, Donna M. "Destination Data: Data Quality Management Key to Organizing Information." *Healthcare Informatics* 15, no. 2 (1998).

3. Watzlaf, V., and M. Saul. "The Emerging Role of the Health Information Management Professional in Data Quality and Analysis of an Electronic Medical Record System." *Topics in Health Information Management* 15, no. 2 (1994): 66-70.

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