From Figures to Facts: Data Quality Managers Emerge as Knowledge Leaders

by Ruth Carol

Collecting the data is just the beginning. Data quality managers turn patient care data into the information needed for research, quality reviews, and future planning. And it's a job for which HIM professionals are ideally suited.

An obstetrics department resident wants to know how many patients have undergone vaginal birth after cesarean in the past three years. A radiologist wants to design a study to track the number of ankle x-rays being performed over the coming year. An administrator wants to know the costs associated with acute myocardial infarction at his or her hospital compared with others in the system.

Who will they call? The data quality manager (DQM).

This emerging position in the HIM arena is generally responsible for developing, implementing, and maintaining a data quality management plan for coding and reimbursement, health records and documentation, and quality data in all divisions of an organization. However, the specific job duties of a DQM are as varied and numerous as the databases they use.

Consistency, Accuracy Are Data Cornerstones

"It's my job to see that the data is collected consistently and accurately," says Donna Fletcher, MPA, RHIA, data quality manager for Child Health Corporation of America in Shawnee, KS. The "data" are submitted by 38 freestanding pediatric hospital members to the pediatric health information system (PHIS), which is also an approved performance measurement system for the Joint Commission.

Because the member hospitals use PHIS primarily for comparative purposes, the data must be collected consistently at the individual hospitals. Currently, Fletcher is reviewing the charge information submitted to PHIS to see that each hospital is using the same codes and that they match the universal charge description codes. Previously, she wrote guidelines for severity of illness to ensure the consistency of data submitted for certain conditions. The guidelines allow the members to review their coding practice and compare it with others in the database, says Fletcher. As a result, some hospitals have changed their coding practice.

She also provides tools to the member hospitals to manage the quality of their own data. Fletcher wrote a data quality management program that details such steps as how to conduct annual data reviews, correctly submit data to PHIS, and review data elements that are not routinely reviewed as part of PHIS.

Similarly, Barbara Peck, MS, RHIA, data quality manager at Redding Medical Center, a Tenet HealthSystem facility in Redding, CA, provides departments throughout the 238-bed acute care hospital with instruction on how to generate their own reports. "We provide them basic performance improvement tools and computer skills. We educate them on how to make a change by testing it first and then implementing it," she says.

But mostly Peck is responsible for ensuring the quality, consistency, and timeliness of the data being entered in the quality and risk management and clinical databases. She calls her department "the report center of the hospital." The quality resources management department produces reports for the medical staff committee, various areas in administration, many departments throughout the organization, and even outside agencies, on occasion. They graphically present data on control charts, run charts, frequency charts, and Pareto charts for hospital-wide indicators in pain management, medication errors, and restraint use, among others, and specific diagnosis groups or procedures requested by the medical staff. Two areas recently gaining

attention are nursing staff effectiveness and patient, employer, and physician satisfaction. The department is responsible for not only developing charts and trending the data but also assisting with the interpretation of data by showing changes over time.

The Right Tools for the Job: Queries

Like many DQMs, Peck is involved in collecting data for benchmarking projects. She recently began working on a new performance improvement program, known as Partnership for Change, which will eventually be implemented at all Tenet hospitals. The biggest component of the program is the collection of core measures in acute myocardial infarction, community acquired pneumonia, coronary artery bypass grafting, and eventually congestive heart failure. "I have to learn how to get reports out of this new system and how to manage my tasks with the new application," she says. If the reports don't exist, she will build them, and they will be sent to the regional director on a weekly basis once the project is up and running.

Janet Franklin, RHIT, CCS, data quality consultant for Kaiser Permanente Program Offices in Oakland, CA, has also designed data collection systems. The most recent project of this nature involves determining the true illness burden of Medicare risk patients for the entire organization. "We want to find out what data we're not capturing and how that would change the illness burden," she explains. After designing a tool to collect that data, Franklin has been traveling around the country to train staff on how to use it. In fact, she is responsible for providing education and training for Kaiser Permanente HIM staff nationwide. Her department develops quarterly video conferences that address data issues and are distributed systemwide. In addition, Franklin has worked on educational videos and workshops on data collection and CPT coding.

Although her job as DQM at 591-bed Winthrop University Hospital in Mineola, NY, doesn't require Patricia Kurz, RHIA, to design data collection systems, she knows all about writing reports. Responsible for overseeing activities for the chart processing area, chart completion area, and abstracting data for both inpatient and outpatient discharges, Kurz is frequently asked to run ad hoc reports.

"As a teaching hospital, our physicians and residents are always asking us to run a query on how many patients in the last five years were admitted with a specific diagnosis," says Kurz. Frequently, they need help narrowing their search for a particular diagnosis, whether by age parameters or secondary diagnosis. "Sometimes it's easier if I run the reports because I know how the file room works and I know what years we have in-house and what years are on microfilm stored off site," Kurz says.

Other responsibilities include submitting abstracted clinical data to the state repository, overseeing medical records review, and coordinating delinquent curtailment charts.

Solving Problems from the Inside Out

DQMs don't just collect data, they turn it into information. They recognize trends, use statistics to find more information, and make connections between raw data and real-life circumstances. When the information doesn't make sense, DQMs identify the problem and find solutions.

"Once our members identify an issue, I dig into the database, mine the data, and figure out what is going on and why," says Fletcher. For example, a member hospital conducting a study on pharmaceutical charges for a given patient population had an exceptionally low number of units for a particular drug. It turned out that the data included decimal points in what should have been whole numbers. Once Fletcher identified the problem, she had to request that the data warehouse make an adjustment, otherwise the hospital would have to resubmit all that data. Another hospital routinely reviewing its case mix found that it was particularly low in one quarter. Fletcher discovered that the tape the hospital provided to the data warehouse didn't have any procedures on it.

Identifying such problems requires developing a good query. In other words, if you ask the right question, you'll be able to solve the problem. If you ask the wrong question, you'll get useless data. "When you develop queries, you're telling the system to pull certain data elements and report it in a certain way, such as a total or average," explains Fletcher. For example, in one file, a request to count the discharge identification numbers yields the number of cases with that principal diagnosis. In another file, that same discharge identification number may be associated with secondary diagnoses, calling up an entirely different set of data.

Formatting can also be problematic for DQMs seeking specific data. For example, sometimes data sent in a text file wraps, requiring the data to be manually moved, which is time intensive, particularly when dealing with thousands of cases. "I can see the data and I know what is supposed to happen, but I just can't import the data into my databases," explains Franklin. Sometimes the information technology staff pull the data from the wrong fields or store it in a different field than the one requested, she notes.

Franklin also recalled an instance when she couldn't get the data she needed to conduct a random review of data submitted to Medicare from contract facilities. The file was too large to be sent via e-mail and a Zip disk didn't work either. Finally, she was able to get the data onto a CD. "If we had one system with everybody using the same definitions and the same data capture systems that talk to each other, it would eliminate these types of problems," she says.

Documentation remains at the forefront of HIM issues with which DQMs must contend. Three years ago, Winthrop established a documentation committee led by the HIM director. The committee has composed a list of abbreviations adopted for use in all forms, standardized the process for developing new forms, and tackled the issue of legibility, resulting in several physicians using a name stamp under their signature. Kurz is the person clinicians go to if they want to develop a new form or revise an existing one. She is also responsible for sending letters to physicians regarding illegible entries. With all of these endeavors, the committee stresses the importance of having clear, concise, accurate medical records for quality patient care.

EHR Represents Real Progress

Although years away, electronic health records (EHRs) will make data much more accessible for DQMs and their staff. While Kaiser Permanente is in the process of developing a standard EHR for all its facilities, the regions are in various stages of paper versus electronic records, notes Franklin. One region's hospitals scan records into the system when a patient is admitted from the emergency room. "By the time the patient is on the floor," she says, "the doctor and nurses can access the document on the computer that was generated downstairs."

Although Redding doesn't have an EHR, a few years ago it implemented an electronic data folder, which scans records into an electronic system after discharge. "My staff can easily access patient records to look at discharge summaries instead of having to forward a request to get charts pulled, which could take a month," says Peck. "It's more timely and everyone can access the records simultaneously. The staff can verify and do quality checks easily. If something is abstracted incorrectly, it can be changed immediately."

Although having access to such data raises issues of confidentiality and security, the very issues addressed in HIPAA, DQMs seem to be only peripherally affected by the regulations. For example, the data with which they work will have to be HIPAA compliant, but DQMs are not the ones responsible for making that happen. DQMs are optimistic that, if anything, the regulations may offer some standardization in data, which could only improve its consistency.

Keeping knowledgeable about issues like HIPAA and various performance improvement efforts within the organization or system is important for DQMs. Serving on quality improvement teams is one way to stay informed. Having an understanding of healthcare finance, outcomes analysis, and continuous quality improvement are also essential knowledge bases. "It helps to have some understanding of the clinical side to work in a medical environment, as well as the technical environment," notes Peck. On the technical side, knowledge of applied statistics, data quality, and integrity measurement techniques such as data mining, data warehousing, and database management tools is critical.

"You also need really good communication, presentation, and teaching skills," adds Franklin. "In our position, we meet all kinds of different people with different personalities, and you need to be able to interact with them all." Flexibility is another key characteristic for DQMs as their role and the technology to do their job continue to evolve.

Facilitating the Exchange of Knowledge

"It seems like every year there is something new and different to focus on," says Peck. When the electronic data folder was being implemented, she was the security officer for that system. She built several reports using it, gave users their passwords, and provided feedback to the developer about its use. Now the HIM supervisor oversees that program, and Peck is focusing on implementing Partnership for Change, as well as collecting data for the quality risk system database she uses to generate routine reports.

When Franklin started working at Kaiser Permanente, she was a regional coding specialist and then became a coding resource specialist for the state. Intrigued with data quality, she developed a data entry tool that enabled her and her co-workers to conduct direct data entry reviews instead of paper reviews, which dramatically reduced the time it took to generate reports. Then she became more involved in data collection.

Technology to access the data has also evolved. Kurz can pull delinquent charts, locate charts, and reprint reports using computerized systems that are only a few years old. A bar coding system enables her to easily move charts around, vastly improving chart flow. "When we're looking for information after the patient is discharged, this system helps move the chart to be assembled, coded, and on its way to the physician to be placed in the permanent file," she says, adding that such systems expedite requests for records and billing, which fosters quality patient care and helps with reimbursement and other financial matters.

When Fletcher joined Child Health Corporation three years ago, she accessed data by modem. One query could take a few days, all the while accumulating long distance charges. Then they moved to CD-ROMs, which speeded up access for the most current eight quarters, which is what the CD could hold. Now Fletcher has direct access to the entire database via the Internet, allowing her to get results in minutes. Plus, she can conduct five or six queries simultaneously, when she used to be able to perform only one at a time. "As we get new classification systems, I see my role as more of a facilitator for mapping data consistently for all the hospitals," says Fletcher.

Peck sees the role of the DQM evolving one day into that of a chief knowledge officer. "I see that as a real possibility to have someone, like ourselves, working in administration, who can bridge the gap between the technical and clinical side of healthcare," she concludes.

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What Is a Day in the Life of a DQM Like?

Winthrop University Hospital's Patricia Kurz tries to prioritize the work flow when she gets in first thing in the morning. Depending on which part of the month it is, she reviews the delinquent chart notification process and may have to send out either courtesy or curtailment letters. She checks the daily edit reports for submission after the coded information is put into the computer the day before. "We have a report that edits the information, and it usually lets us pick up on items that were erroneously deleted or missing," she explains. "I take a quick look at that to stay on top of it."

Kurz also works with the filing and transcription managers on a daily basis. Then there are the ad hoc reports to be written and agendas for various committee meetings to be prepared. Typically, during the day some personnel issues arise that must be addressed and routine office problems, such as equipment breakdowns, handled. "I'm a jack of all trades," she says.

Janet Franklin's day at Kaiser Permanente is spent juggling the many projects she's working on at any given time. "Today I'm getting data from two different regions for one of my projects. When they finish sending me all the data, I will do some cleanup, checking it over before I send it to the statisticians," she says. "Then I'll do a report based on my findings." She is also helping update a data collection tool for a home health facility. In between, Franklin takes telephone calls from regions around the country regarding data collection and coding.

Fielding phone calls from member hospitals can take up a big chunk of Donna Fletcher's day at Child Health Corporation. "You investigate, do some queries, and maybe contact the data warehouse to find out what the problem with the data is," she says. "You need to like looking at rows of data and being able to discern anything that is weird. If you don't see anything unusual, then you need to look at the data in ascending order, then descending order. You have to ask questions about the data and keep asking, writing, and modifying queries to see if there is anything off."

Fletcher is currently reviewing invalid principal diagnoses and ungroupable diagnoses. She is also getting ready to run the applications to produce the annual data quality report card.

Like Kurz, Barbara Peck tries to create some structure to her day at Redding. "Your day might allow you to focus on getting quality reports done," she says with a pause, "or it may involve a lot of meetings or problems to solve, which might happen the minute you walk in the door."

Maintaining Quality and More

The data quality manager's major responsibilities may include any or all of the following:

- Participating in the development of the organization's information plan and data quality management policies and procedures
- Monitoring compliance with the organization's data quality management policies and procedures
- Coordinating the collection of data for the organization's clinical or combined clinical-operation databases
- Maintaining the organization's data dictionary
- Maintaining the quality of the data in the organization's data warehouse
- Performing regular quality reviews and addressing any shortcomings identified through continuous quality improvement activities
- Providing staff training in data quality management policies and procedures
- Providing consulting services in the area of data quality management to individuals, special projects, and departments throughout the healthcare organization

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