

Informatics in Managed Care: HIM Adds Value to Data

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by Scott D. Stratton, MPH

The third installment of the Journal of AHIMA's special series on managed care focuses on informatics-methods that add value to data, turning it into useful information. How do informatics and managed care fit together, and what is HIM's role in this picture?

The HIM professional's knowledge is critical to the health team responsible for the interpretation and use of statically valid information. For example, HIM professionals are well positioned in their understanding of the construct and application of coding classification systems (ICD-9-CM, CPT, etc.), and groupers (DRGs, APCs, ETGs, etc.). Their unique training positions them to understand the associated rules, principles, guidelines, and nuances associated with correct coding and grouping.

And when codes or groupers change, HIM professionals work closely with the health team to ensure parity, validity, and reliability of the appropriate data or data sets. Managed care organizations use value-added data, as you will see in this article, to evaluate contract pricing, develop contracts, evaluate existing services or detail benefit plans, process and in some instances pay claims, and report results to a number of interested parties.

The previous article in this series ("Can You Manage Managed Care?" July/August 2001) focused on effective management of data, including data acquisition. This article takes us to the next level, where informatics creates value-added information, and discusses some important uses of this information within managed care. These articles build on two of the functional areas that form the HIM process within managed care organizations.

Author Scott Stratton studied under the creators of DRGs and was involved in the development of their nursing home counterpart, RUGs. He also has worked with the creators of ETGs. As a result, he can present the perspective and context within which these systems were created and intended, and how they form the foundation for informatics as a functional area within managed care.

Information drives healthcare. How you collect, analyze, and use that information determines whether you are the driver, the sightseeing passenger, a back-seat driver, or road kill. How quickly and effectively you can do this determines whether you are setting the pace or being passed by. This metaphor applies particularly to the managed care arena.

For HIM professionals working in managed care, the management of information works on four different levels-data management, informatics, decision support, and quality improvement. This article will discuss the principles of applied informatics-the process of refining content and groupings and creating methods to classify managed care services. In other words, informatics is the process of adding value to data.

What role do HIM professionals play in ensuring this process is effective? This article will explore that role, as well as how basic principles learned by HIM professionals, such as coding and grouping of diagnoses/procedures, can be applied to the managed care environment today and beyond.

A Revolution Begins

One of the most profound innovations in health management in the last 50 years was the development of diagnosis related groups (DRGs) and the rich informatics that they made possible. In many ways, DRGs and their offspring (RUGs, APCs, ETGs, etc.) form the dashboard of gauges and billboards by which we measure and assess our progress along the roads comprising our healthcare and financing systems.

In this article we will explore why this was so revolutionary, why case mix analysis and informatics will become even more important in the future, and how critically important the HIM professional is and will be in this revolution. We will begin by evaluating what can happen when case mix considerations are neglected.

The previous article in this series reviewed the various stakeholders in today's environment and outlined some of the major mechanisms for financing and sharing risk, many of which are based directly or indirectly on the DRG revolution. Because my career has included working in and for hospitals, in a regulatory agency, two managed care organizations, and a pharmaceutical company, I'll give you the perspectives of how each of these stakeholders can benefit from HIM expertise.

It's About Aligning the Bottom Line

The current frustration around managed care arose largely from avoiding and not managing risk. Too many managed care organizations (MCOs) avoided high-risk industries and employers and highly regulated states. They then tried to reduce the remaining risks by restricting choice, creating obstacles to obtaining care, and pushing risk onto providers through capitation and per diems that were not adjusted for case mix differences, but which locked in profit margins. (This is not just a US phenomenon; many national health services manage similarly.) Medical policies were driven largely by opinion, seldom by analysis, almost never in public view. In such an environment, little medical data was shared. The relationships among the key stakeholders could only be adversarial, with others' motives suspect.

This strategy succeeded for years for two reasons. First, there wasn't enough pressure on MCOs to demonstrate effectiveness other than simple premium control. Indeed, since managed care (along with the prospective payment system [PPS]) finally reigned in the double-digit premium growth of prior years, its back was patted and virtues sung. To be sure, there were many wasteful practices that "simple" managed care was able to expunge, primarily concerning admissions and length of stay management and concerning volume purchasing economies (lab procedures, mail-order drugs, etc.). Second, the other stakeholders lacked the information, ability, or incentives to create the pressure to change. That stakeholders like hospitals, large physician groups, and their trade associations failed to exploit their clinical databases and experts amazed and dismayed many of us.

Capitation, while successfully transferring risk to providers, removes any incentive for the provider to furnish encounter data that are complete, timely, and accurate. Losing the detail of what occurred meant losing much of the opportunity to learn, hence to improve care and differentiate oneself. This approach of reducing risk via capitation actually reduces knowledge.

Some stakeholders, like some pharmaceutical companies, recognized that in this environment, MCOs or other financiers would assume that any new drug or other technology would be a "budget-buster." Such companies created groups termed "Pharmaceconomics" or "Outcomes Research" or "Health Economics." Whatever the name, one function was similar: demonstrate that for a specific cohort of patients-read "case mix classification"-new treatment X would lower the overall economic cost or tangibly affect their quality of life.

In other words, these groups framed the debate about economics within the context of caring appropriately for particular patients. The medical policies must then, so to speak, look into the faces of those they affect. Applying standard techniques of epidemiology, statistics, and research design gave their studies scientific credence-and, as a result, leverage with MCOs.

My previous MCO experience suggests that some MCOs saw opportunity in creating and leveraging case mix systems and invested heavily in them. The last one I was with had exactly the right idea, in my opinion: to manage costs over the long term, one must manage episodes of care both collaboratively and with aligned incentives. That is, rather than tell the physician whether or not he may admit a patient and for how long, instead let the provider share in the cost and benefit of that decision and thus empower the provider to make that decision. Let the medical team practice medicine.

Previously, every MCO had saved for itself every dollar of avoided hospital and other non-physician costs. This left the physician-the clinical decision maker-in a no-win situation: under most managed care plans, he or she could at best make as much money as before managed care, and most of them would do worse-not much of an incentive to help the MCO.

Share some of the hospital (and other) savings, however, and now the physician could increase his/her income under managed care. Not surprisingly, when empowered, clinicians would manage care more actively than would the MCO. Some physician groups even changed the hospitals to which they would admit once they learned of the cost differences. What grew rapidly

and relentlessly, however, was a thirst for information that would help them make better decisions: which hospitals and specialists performed better with certain cases, or how their peers treated similar cases. We'll return to this theme shortly.

Once the easy cuts were history and Medicare and Medicaid further cut their payments, the underlying medical disease and technology drivers caught up (as they were not being managed during this time). MCOs finally had to face reality. Employers demanded some simple process and outcome metrics (i.e., HEDIS). They were surprised at how difficult it was for so many MCOs to collect such basic metrics, fueling suspicion that what was being managed was cost and not care.

Politicians and the media showcased the horror stories of denied care, unqualified care, and "drive-through" medical policies. But these are really focused on the same thing: whether care is appropriate for a specific condition, given the state of medical knowledge and the ability of the care team to apply it. As MCOs backtrack on many policies, ease their access restrictions, and enlarge their networks, this will only increase the pressure to focus attention where it will do the most good: on the quality of medical care and how we measure it. The need for the talents of HIM professionals will only increase.

This means that managed care will increasingly need the skills and experience that the various PPSs with their obligatory three-letter acronyms-DRGs, RUGs, APCs-have also required. True managed care, however, manages care across settings and over years, so its techniques and systems will have to be much more sophisticated than those focused on hospitals or nursing homes. With this said, let's examine how MCOs potentially apply information to meet this cross-continuum management need and how important the HIM professional's role is in this process.

Managed care's primary focus will most likely have to be on episodes of care, which in turn may involve hospital admissions (hence DRGs), nursing home stays (hence RUGs), and so on. Because episodes can run for years, the smart MCO will need to keep track of which version of DRGs, RUGs, etc., correspond to each component, as the definitions and payment will vary over time. The future learns from and builds upon the past use of case mix and classification, so let's look to the past to see how HIM can contribute to the future.

It's About Quality, The Patient, and a Common Language

Quality drives most of us. We wish to do our jobs as best we can. We wish to increase our knowledge and expertise, both professionally and personally. We certainly want to ensure and foster the quality of medical care. Being professionals, we recoil with disgust whenever quality appears compromised.

Quality, not financing or reimbursement, drove the development of DRGs. They were not created to ration care or to evict patients from beds. They were developed to support quality improvement initiatives within hospitals-by clinicians, for clinicians. They were created to help measure and improve the quality of care. We'll see in a moment why DRGs became synonymous with payment.

Before DRGs, health managers focused on the inputs into patient care: radiology, lab work, physical therapy, so on. The clinicians focused on the process-patient care-but on a case-by-case basis, as they were trained. There was little common ground for discussions; each looked at the world differently. There was no way to align their interests and incentives.

DRGs provided that alignment by defining pragmatically the outputs of patient care: groups of treated patients. It is the specific combination and sequencing of the components that tell us how, why, and how well the patient was treated. Case mix systems like DRGs also enable us to examine

the alternative processes. A surgical procedure may have been performed expertly and efficiently, but was it-or any surgery-the best course of treatment for this situation?

There are generally enough patients within the groupings who are similar enough clinically so that clinicians could meaningfully discuss differences in the care processes. For managers, DRGs became their products, so they could finally apply basic management techniques such as product costing. The entire care and management team could now have informed discussions about the processes and costs of treating similar patients. The economics of care were again framed within the care needed for the patient.

It's About Pragmatics

Why were DRGs and their progeny so revolutionary and adopted so broadly? After all, classification taxonomies were many and pervasive. Disease and procedure coding such as the ICD, CPT, and DSM systems had long been commonly used. Most hospitals had subscribed for years to the Professional Activity Study, the national data initiative that aggregated patients into age/sex/surgery matrices across a few hundred diagnosis groups. Other patient classification schemes performed disease staging or used patient management categories such as APACHE or computerized severity indices such as MedisGroups—all vying for the attention of health managers, clinicians, and policy makers.

Patient groups were split into DRGs only if the criterion explained length of stay and cost differences—adding value in data analysis. They statistically “explained” a significant amount of the variations in length of stay, typically 30 to 40 percent, depending on which version of the grouper was used. But DRGs succeeded because they were practical as much as useful statistically. Essentially, to be meaningful, the grouping mechanism must have these features:

- mutually exclusive—a patient or service can fall into one and only one group
- collectively exhaustive—each medical concept falls into a grouping
- manageable number of groups—operationally defined as 500 or fewer
- medically meaningful (or “clinically coherent”)—patients within a group are sufficiently similar from a clinical perspective
- created from routinely available data (electronic!)

Essentially, the same dynamic applies to other classification exercises, like the HEDIS numbers that MCOs report annually. Nothing improves the collection and coding of clinical information more than by linking it to finances, either directly, as with payments, or indirectly, as with those who choose health plans based on HEDIS results.

These same criteria made PPS groupers appealing to regulators and payers and today make them appealing for contracting with MCOs. Once the initial organization and processes to set rates are defined, electronic data enables the massive recalibration of rates, outlier thresholds, and the like to be increasingly automated and scaled up from one state to a nation. Case mix systems offer another significant—but overlooked—advantage in contracting in that they can be considered to be independent referees. Rather than arguing about whether a particular CPT service is included within the global fee, abide by what the ETG grouper decides. Each party can then independently run its own data through the same software and price bids accordingly.

It’s About Measurement and Judgment

The data are what they are—objective in cases like lab values and specific procedures performed; more subjective as with symptomology associated with diagnoses. We all know those who list a diagnosis being ruled out as a definitive assertion, or who use euphemisms instead of the true but sensitive condition like HIV or substance dependence. In the early days of DRG-based hospital payment, arguments were frequent and animated over which diagnosis should be identified as “principal.” Correlating exam data with associated procedure results (e.g., lab, radiology) would yield a better read of the patient’s condition and substantiate the “definitive” or principal diagnosis. In turn, this yields more accurate grouping results.

DRGs also introduced to non-statisticians the data concepts of “outliers,” “central tendency,” and “variance.” In any statistical distribution such as length of stay there will be a central point, typically measured as the arithmetic average (mean), on which the rates are roughly based. Those who are often involved in case mix analyses should realize that the mean overstates the “true” middle (the median or 50th percentile), and that there is often much opportunity in managing cases below that point. That’s because the long-stay patients pull up the average, and the low end cannot get less than zero.

That leads us to “outliers”—the very high and low values for no readily determined reason that require review and some type of action. Hospital HIM personnel know outliers well. What is less apparent is that PPS “carve outs” for psychiatric and rehabilitation patients resulted from the lack of predictable lengths of stay for the corresponding DRGs; instead of the bell-shaped “normal” curve that we saw in school, these DRGs looked like speed bumps. All of these principles are relevant today and for any case mix system. Learn them. Use them.

The need for HIM kicks into overdrive when the focus becomes episodes of treatment. This creates the need to view data across the continuum or across services—for example, from acute care to ambulatory services to pharmaceutical usage. Hospitalizations, hence their information systems and processes, focus on the condition requiring admission; secondary

conditions are treated only as needed. MCOs must focus on all of the patient's conditions, some of which may require hospitalization at some time.

Now, let's apply some of the basic concepts of grouping mechanisms to the world of measuring episodes. This is the epitome of informatics, where commonly collected data becomes truly valuable to the organization. One way to look at this is through the lens of a system like episode treatment groups (ETGs), a patented illness classification and episode building software product.

Using the ETG example, combining claim data from multiple sources, one can now discern one episode for each discrete disease or disorder, especially where patients have multiple concurrent conditions. ETGs will assign every claim line to one (and only one) ETG (our old friends "mutually exclusive" and "collectively exhaustive"). One can even distinguish between care that is part of an episode that has extended and that is a recurrence. ETGs unfortunately can create an array of episodes, such as when a cancer metastasizes; understanding the user of the system must have the knowledge of how to clump these episodes into an overall cancer episode. Because certain procedures and labs are useful across episodes, the expertise of HIM professionals is needed to determine how to handle this analytically: whether you assign the procedure to one episode, split it across the relevant episodes (e.g., 1/3 per ETG), or duplicate it (e.g., show the procedure in each episode).

It's About the Future and You

Episode-based contracting, involving case mix and informatics, is the latest movement in contracting. It's a more elegant way to share risk appropriately among payers and providers and offer patients broader choices among sets of providers, each of whom agrees to the episode's bundled services and rates. Over time such contracts will collect detailed data about each provider's outcomes, empowering employers and consumers to find the best providers. Because many episodes can run months and cost thousands of dollars, the case and its payments must often be broken into segments like work-up, intervention, and follow-up, each with its corresponding clinical information. HIM professionals are ideally suited to handle the complexities and challenges that this new environment will bring.

The HIM profession will continue to be involved in the refinement of case mix systems. It will also be involved in developing new ones, applying them within the care setting, focusing the collection and grouping, and particularly analyzing the data—particularly as episodes of care take root. In this way, we're sure to see how HIM will create added value and clinically meaningful information throughout a managed care environment.

More on Managed Care

This article is the third in a five-part series on HIM and managed care. Check out the previous articles in this series:

"How HIM Adds Value to Managed Care," published June 2001

"Can You Manage Managed Care?" published July/August 2001

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