

Closing the loopholes in revenue cycle-supply chain links

Can IM-CDM connections be mastered?

by Rick Dana Barlow

Supply chain and revenue cycle managers may see black and green when it comes to investing in and using information technology to manage the item master (IM) and chargemaster (CDM) files, but getting the two to work together can have both seeing red – emotionally and financially.

But an expense-reducing and increasingly supply chain-focused C-suite, motivated by a shaky economy, are looking for as many solutions as they can find to maximize revenue and efficiencies while minimizing costs. That includes knowing with accuracy what you're buying and how much you're paying for products used for services as well as what you're charging and collecting for those services – and making sure they match up with strategic expectations.

In a Healthcare Financial Management Association survey of its members last year, the majority of respondents stated they believe they receive revenue for less than half of their chargeable supplies.

Even though a growing number of organizations are linking their IMs and CDMs, more have yet to make the connections – physically and mentally – that can lead to financial stability.

Pain management

As payers continually search for ways to lower reimbursement for services provided, how much fiscal and operational pain must providers experience before they plug supply chain data into revenue cycle data and vice versa?

Because such linkages require starting with a clean item master, hospitals may feel a great deal of pain to make it happen but can heave a sigh of relief by knowing it's considerably less than postponing the linkages or even avoiding them altogether.



Mary Beth Lang

"Linking the supply and revenue sides of an organization is critical to financial and operational success," said Mary Beth Lang, senior vice president of business intelligence, [Amerinet](#), and president, Diagnostix, St. Louis. "When supply chain managers and revenue cycle managers understand each others' roles and goals, and make sure that those are in alignment as much as possible, it helps ensure that cost reduction and supply procurement are linked to maximizing revenue and margins."

For Scott Gardner, product manager, compliance technologies, [MedAssets Inc.](#), Atlanta, revenue cycle-supply chain links represent the secret weapon against silo management.

"Everyone in hospital management is concerned with the overall financial health of their facilities and systems. By understanding how their individual departments are interdependent and affect the whole organization, supply chain managers and revenue cycle managers can begin breaking down some of the work silos that can lead to waste and inefficiency, Gardner indicated.

"In today's healthcare environment, hospitals are struggling for every

percent of margin they can," he continued. "Hospital margins are affected by both rising costs and decreasing reimbursement. Traditionally, materials managers have been focused on cost reduction, but by working with their revenue cycle teams they can actually be an integral part of combating decreased reimbursements as well."

Indeed, Michael Rudomin, principal, [HealthCare Solutions Bureau LLC](#), Bolton, MA, pointed to a hierarchy of issues that financially justify supply chain's connections with revenue cycle management.

"Simply put, materials managers are the 'keepers of the kingdom' as they hold the purchase price of supplies in their domain," Rudomin noted. "Revenue, at least as supplies are concerned, is built upon this purchase price. As such, ensuring this data is accurate and always updated as prices change is critical and best accomplished by having both processes – and managers – integrated and working together."

But, like Gardner, Rudomin also emphasized that both areas must break down barriers erected when managers come from different disciplines and speak a different language.

"To be successful, each must understand the common goal, identify what pieces of the puzzle they own, and commit to moving beyond a 'silo mentality' in order to accomplish that common goal," he said.



Michael Rudomin



Ken Cyr

The silo approach can limit supply chain's progress even before it reaches out to the revenue side, according to Ken Cyr, a former supply chain manager now serving as a product manager for software company [Craneware Inc.](#)

"When I started my career in hospital supplies most hospital materials departments were operating in negotiate-the-price, fill-the-orders mode," Cyr said. "Twenty-five years later, some materials departments have evolved to a more strategic role. Their managers have learned to step back and look at the entire healthcare system as a business. Those more progressive materials managers run their operations around the bigger picture of the hospital's financial security and financial stability. They focus on far more than cost containment, and therefore bring great value to their hospitals."

Because revenue managers develop charges based on accurate and timely information they rely on clean item masters that will not have multiple charges and descriptions for the same item or items that are inactive and have not been used in years, he said. A link to the chargemaster will ensure that item pricing is updated when any change occurs, he added.

Yet Lang noted that both areas have to bridge the different information systems and processes they maintain. "Change can be costly, ramp up time consuming and culture change difficult," she said. "Also, they look at many of the same problems from different angles and spheres of knowledge and interest. Revenue cycle managers generally are focused on coding and reimbursement. Supply chain managers are concerned with contracts, supply costs and inventory systems."

Todd Tabel, vice president and general manager, ERP Solutions, [McKesson Corp.](#), San Francisco, concurred.

"Historically these two departments have not worked closely together so there will need to be procedures created to ensure that the systems are updated in sync if they are not integrated," he said. "Additionally, procedures should be created to delineate who is responsible for updating each piece of information to eliminate confusion and ensure systems are properly built. In order to ensure these processes are properly created there should be an oversight committee created with representation from both functional areas, as well as administration to facilitate agreement."

Working together upfront can make it easier to re-price supplies when their costs change, which is a difficult process, according to Michael Whitacre, a former supply chain manager now serving as a Craneware business solutions consultant. "If the materials department can consistently feed current information to revenue cycle, that's Step 1," he said. "Step 2 would be to automate the re-pricing process. But that can't happen before Step 1."



Todd Tabel

But the communication shouldn't be one-sided, Cyr cautioned. "Most materials managers call it a win if they can avoid a cost increase on a commodity," he indicated. "But a zero-percent increase is not a win if the revenue for a service decreases. That's a situation in which the revenue managers need to let materials managers know exactly what they're facing, so that the materials managers can do what they do so well in negotiating with vendors."

Lang advocated forming multidisciplinary value analysis teams to impact margin improvements.

Whenever a particular supply, drug or device is used on or implanted in a patient the event triggers a variety of billing codes and revenue opportunities to take advantage of, according to Lang. "Third-party payers require that the provider's billing references the specific device used, and these billing codes must correlate perfectly with medical record documentation," she said.

"In order to keep these processes synchronized and accurate, the Supply Chain Leader must understand the requirements, and establish policies and practices that will maintain and update all systems on a synchronized basis," Lang continued. "Much of this information can be supplied by the vendors who sell the drug or product, but the Supply Chain Leader must also facilitate the exchange of that information with the appropriate staff within the billing office as well as the clinical departments who requisition or utilize the devices."

Lessons learned

Sometimes suffering through a series of pain points can generate significant rewards even if it feels like a "one-step-forward-and-two-steps-back" process.

One of Rudomin's clients, for example, faced a wake-up call about maintaining a clean item master as they were preparing to implement a new enterprise resource planning system.

"As is often the case in many hospitals, they had been somewhat lax over the years and ended up with some individual items having as many as 8 to 10 different item master descriptions," he recalled. "In addition, there were items in the file that hadn't been purchased in years. The significant cost of loading this unnecessarily large file into the new ERP system quickly became an issue, and the hospital subsequently decided to review and collapse the item master to ensure each unique item had only one description and inactive, no longer purchased items were deleted."

Another client reviewing its chargemaster uncovered different prices for the same items, those items having been loaded multiple times in the past into the item master by different people and under varying contract and pricing scenarios. The result? Depending on the selected description, the item's cost was found to vary by as much as 35 percent. "Clearly, creating charges based upon old or inaccurate data is not the way to maximize revenue," Rudomin added.

Lang recalled an Amerinet member with a costly no-holds-barred approach to purchasing. An initial review of the facility's spending found that 30 percent of the expenses were processed as a free-form purchase order and deemed to be "rogue" purchasing. The Amerinet Diagnostix team learned that the reasons for this decision involved an item not being easily identified in the item master if included at all. Furthermore, the facility did not have a formal policy stipulating which items to add to the system and did not have dedicated staff assigned to updating the item master.

Changing the process to include consistent loading of information into the item master by a single source, refining item attributes, inserting Amerinet contract data and adding UNSPSC categorization, led to a reduction in free-form PO spending to 8 percent and improved control over the remainder, according to Lang. This helped the facility to generate \$2.7 million in supply savings for the first 12 months, she added.

While many organizations readily understand and support linking the item master with the chargemaster, some already have been reaping the benefits as others seek ways to start the process.

For nearly the last two decades, Arlington, TX-based Texas Health Resources has assigned a number to each and every product that links the item master to the chargemaster, according to Becky Daniel, regional director, supply chain.

"We provide a one for one product match with the chargemaster," she said. "We have a formula code assigned to each patient billable product that drives the patient price to change – up or down – based upon our most recent average basic receipt cost of the product. It is one and the same."

THR manages its item master, which was created and developed with internal programmers, from the corporate office and works to keep it cleaned regularly, she added.

Short of automatic integration similar to THR, some have created interfaces between the two.



Terry Murphy

"Our item master is linked to our chargemaster," said Terry Murphy, director, supply chain management, [Lee Memorial Health System](#), Fort Myers, FL. "Any updates to pricing or descriptions are processed to the chargemaster each evening via an interface from the purchasing item file."

At [Greenville \(SC\) Health System](#), the item master sends an update interface, which includes item detail information as well as the cost per item, to GHS' home-grown CDM system, called Crosswalk, according to John Mateka, FAHRMM, executive director, supply chain operations.

Los Angeles-based USC Health Sciences currently maintains separate systems but is planning to implement a new Lawson system in the second quarter of 2011 that will allow data synchronization, indicated Jean Sargent, CMRP, FAHRMM, director, supply chain. "The CDM is being reviewed with no specific software or timeline for change," she added. "My plan is to have the synchronization occur with the implementation."

While the item master is not yet linked to the chargemaster at [Geisinger Health System](#), Danville, PA, Deborah Petretich Templeton R.Ph., vice president, supply chain services, recognizes the need and value of getting it done system-wide, based in part on what happens in the operating room. "The item master contains CDM numbers for chargeable items, but the files are not linked in an automated way," she said. "We do maintain both CDM numbers and item numbers in our OR system. Currently this is the only 'partial' link that exists."

Two key reasons keep the item master and chargemaster separate at least for now at [Texas Children's Hospital](#), Houston, according to Robert Adkins, CMRP, assistant director of supply chain, support services. The item master is from PeopleSoft and the chargemaster is from Epic, which also supplies the facility's electronic medical record, a higher implementation priority currently. "We do have a unique item-based revenue identifier from the [chargemaster] that is manually loaded into the item master," Adkins noted. "Interfacing makes sense and is desirable, but our IT team is still very involved with the EMR roll out."

Even though supply chain manually loads the revenue identifier data into the item master, Adkins admitted the time commitment is minimal and the static number isn't changed until it's removed from the chargemaster.

Still, he acknowledged that supply chain and revenue cycle managers would have to work together with IT to push for any item master-chargemaster linkages once the Epic upgrade is completed.



Deborah Petretich Templeton



Lisa Killam

"We have two people in our purchasing department who work intimately with our suppliers," said Lisa Killam, reimbursement charge supervisor, [St. Joseph Healthcare](#), Bangor, ME. "They ensure that vendors provide all the necessary data that the reimbursement department needs to process claims. And, in today's world, the person managing the chargemaster really needs to be experienced – with understanding of both the revenue cycle and coding. They also must be able to work hand-in-hand with materials managers. The old-fashioned approach of assigning chargemaster to an IT or data-entry person who doesn't have this background, just doesn't work today."

"Now, more than ever, proper chargemaster management is vital to ensuring that the hospital achieves optimal appropriate reimbursement for the services and supplies the hospital provides," Killam continued. "Without the necessary knowledge, the chargemaster manager just can't achieve this for their organization."

Brian Patterson, R.N., chargemaster coordinator, revenue management, [University Hospital](#), Augusta, GA, agreed.

"The biggest motivator for me to link the item master with the chargemaster is to have the ability to manage the charges based on the increase or decrease of the acquisition cost of the supply," Patterson said. "Having the logic to do it and the ability to read the description so you can see what you need to do with it is very valuable. To accomplish this, though, you need to have standardization between describing your product in the item master and chargemaster. It is very helpful to start now creating those common descriptions. As new items come in if you give them the same number in the item master as in the chargemaster, you'll be way ahead when your organization is ready to link the systems."

Common sense

For multi-hospital systems, maintaining a common item master and a common chargemaster across all member facilities can be as integral as linking the revenue with the expense sides of the equation.



Brian Patterson

THR's Daniel stressed the inherent efficiency of doing it. "With the formulas driving the charge, it is always current as the product cost changes," she noted, and it allows for quicker and better analytics of data." In addition, should anyone question any charging and pricing discrepancies, the common systems and linked files provide validation, added John Gaida, vice president, supply chain.

Achieving such data harmony can be challenging, particularly as new facilities are added to the mix.

Such is the case at Lee Memorial, which recently acquired several facilities that operate a separate chargemaster, according to Murphy. But they plan to convert them during the next 18 months. Nightly interfaces with the single item master cover the expense side.

Geisinger maintains a common item master across the system and is working toward a corporate chargemaster, according to Templeton. "For both data sets, having one central source of truth for information helps to ensure accurate price and cost information are maintained, and there is a gain in economies of scale in managing from a central point," she said. "Maintaining this information as accurately as possible is becoming increasingly important as costs and charges become more transparent and as consumers continue to ask for this information on a more frequent basis."

Texas Children's maintains a single PeopleSoft item master but department-based chargemasters that can "point" to the Epic pricing database, Adkins indicated.



John Mateka

Greenville Health facilities can access the system's common Crosswalk chargemaster, according to Mateka, but item charge codes can be different based on which facility uses the items. "We have five facilities and four of those have operating rooms, and there is no one person who is the CDM delegate for the items," he said. "This is very difficult to maintain and classify in sub-accounts."

Rudomin said he recommends that clients maintain a common item master across all of their facilities to facilitate contract compliance and analyses as well as supply consumption analyses.

While a "common chargemaster also makes sense, some very large, geographically-dispersed IDNs may want or need the ability to charge differently at each hospital depending upon local market conditions," he added.

Lang acknowledged the challenges but reinforced that the ends justify the means.

"Maintaining commonality between chargemaster and item master makes charge capture easier to track and increases consistency and transparency within an organization," she said. "It may be very difficult and costly in larger organizations, but leads to more efficient value analysis and benchmarking, which ultimately assists organization in identifying standardization opportunities, maximizing utilization options and identifying areas of possible margin improvement and revenue growth."

Operating a common item master and a common chargemaster across all facilities within a system definitely makes sense, emphasized Whitacre, Craneware. "Now we all recognize that's not easy to do in the beginning," he acknowledged. "It typically takes a year or more to pull that off. But think of just the time and labor involved with keeping multiple item masters and multiple chargemasters. Why incur that expense?"

Craneware's Cyr agreed but added that the ends don't eliminate the means. "Once the item master and the chargemaster are standardized, it's important to keep them that way," he noted. "And that boils down to who has input and who has access. The more input people have into the process and the more access people have into the process, the more confusing it can get if strict workflow isn't followed."

Gardner encouraged healthcare organizations to maintain a common chargemaster and item master because it eliminates "the need to manage multiple data sets, each requiring maintenance to prevent errors and decay over time." Plus, centralized management can increase consistency in purchasing and charging practices across the hospital system. "This can be perceived as a loss of control by the individual facility managers but in the long run could benefit them as well through reduced errors, decreased cost and increased revenue," he added. **HPN**



Scot Gardner

Making IT work

Supply chain pros offer more than 30 tips for successfully linking revenue cycle's chargemaster to the supply chain's item master

- Attempt to have just one file – item and charge master combined – as a master file that is your "source of truth." Depending on your billing system, you should be able to connect many charge codes to one master number.
- Agree with finance, managed care and/or the business office on who will update information.
- Keep information current.
- Work closely with managed care on contracting.
- Determine which products should be charged for and which not, depending on reimbursement, and watch bundled billing very closely.

– **John Gaida and Becky Daniel, [Texas Health Resources](#)**

- Communication between all parties is key. Acronyms can be confusing and misunderstood. Take the time to translate to each other.
- Make a commitment to process improvement.
- Educate on the business practices, flows and requirements of each group.
- Create commonly understood goals and a defined scope as you get started.
- Define metrics for measuring success and that can be used to monitor the process going forward. Maintain not only "data links" in the future, but also create "human links" that will enable the total process to stay in sync.

– **Deborah Petretich Templeton R.Ph., MHA, Geisinger Health System**

- Drive simplicity.
- Synchronize item master and chargemaster.
- Have a single item master, as well as a single chargemaster pricing database.
- Determine how your organization will capture reliably the transactions leading to correct billing and non denial.

– **Robert S. Adkins, MS, MBA, CMRP, Texas Children's Hospital**

- Meet with the revenue cycle team to understand each others' processes and available functionality.
- Determine how the systems can be synchronized.
- Involve reimbursement to gain buy-in to the process being created.
- Discuss the concerns with the CFO.
- Work with the vendors to obtain the reimbursement codes.

– **Jean Sargent, CMRP, FAHRMM, [USC Health Sciences](#)**

- Involve both materials managers and revenue cycle managers – it's a must.
- Have a clear, attainable vision of the hospital's goals
- Identify items and charges that are high priority first, such as separately reimbursable implants and other high-dollar items.
- Develop a regular consistent approach with open lines of communication between materials management and revenue cycle departments.
- Remember that everyone is on the same team and there to promote the hospital's financial health so that it can continue to serve its patients and communities.

– **Scott Gardner, MedAssets Inc.**

- Start with a clean materials management information system item and charge code master files. This may require a time consuming cleansing process but will be well worth it.
- Create clean and crisp procedures to control additions, deletions and updates of these master files.
- Work with the clinical departments. Their input will be critical to the success of the process as they are going to be the areas entering information that will utilize the charge codes so they will have to fit their business needs.

– **Todd Tabel, McKesson Corp.**

- Secure a management mandate to get this done. Once that occurs, the appropriate resources will be made available to develop an interface between the two systems and ensure they are kept in step with each other.

– **Michael Rudomin, HealthCare Solutions Bureau LLC**

- Accuracy is key. Make sure controls are in place at logical points that data is accurate before moving to next steps.
- Educate staff on common department charge codes and establish a process to notify them when codes change.
- Review each state of the revenue cycle to identify strengths and weaknesses. Implement changes accordingly.
- Review claim forms regularly to ensure whether staff are using current codes.
- Tracking outcomes and correlating this to standardization initiatives to ensure product use and selection is also a contributing factor to overall organizational revenue enhancement and quality improvement efforts.

– **Mary Beth Lang, Amerinet Inc.**

- Have vendors submit key information in advance before a new item is actually used up on the floor. In the area of implants, for example, we have developed a system that runs in sync with our material system. Whenever a vendor is introducing a whole new implant system they need to give us the entire item file in electronic format, so we can load it electronically into our synchronized system. Then, our purchases are compared to that system to see if the product code has been submitted and that the price has been established. That avoids problems and delays down the road. This process can only work effectively if there are electronic interfaces to help manage the sheer volume of data that is prevalent in the healthcare environment. Most MMIS systems are pretty structured so I have found it helpful to have a flexible and easy to manage system interfaced with the MMIS system to assist with managing the data. [Vendors] have a direct stake in providing all the information we need to process claims promptly. Any delay there also delays payment to them. That's a self-regulating thing, and it discourages vendors from trying to bypass our established purchasing procedures.

