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(Continued on next page)

JUNE 2000

VOL. 18, NO. 6 (pages 81-96)
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Hospital concerns addressed in final outpatient PPS rule

Increased payments still don't make up for BBA cuts

Hospital administrators anxiously awaiting the final outpatient prospective payment regulations from the Health Care Financing Administration (HCFA) can breathe a sigh of relief. Many of their concerns have been positively addressed.

"If I were a hospital, I would be pleased with the outcome," says **Kevin Quinn**, senior health economist with Abt Associates, a health care research and consulting firm in Washington, DC. "There is more money on the table — an overall increase in the budget."

Compared to the proposed rule, the final rule offers more money, reimburses for more outpatient services and devices, and provides a transitional corridor for those programs that suffer losses.

"Surprisingly, many of the administrative changes made in the final rule reflect the impact of the 10,500 comments received from health care organizations, physician groups, beneficiaries, professional organizations, and special interest groups," says **Laura Frazier**, RHIT, manager of APC solutions for QuadraMed Corp. in San Rafael, CA.

> *"The rule has a transition mechanism that only works one way — it only increases people's payments, not decreasing some of them."*

The payment system is based on 451 ambulatory payment classifications (APCs). The regulations, published in the April 7 *Federal Register*, also are available on HCFA's Web site (www.hcfa.gov). A 60-day comment

COMING IN FUTURE ISSUES

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period applies only to the regulatory changes in the final rule that resulted from the 1999 budget law. The final rule is effective July 1, 2000.

Hospital outpatient units will bill for services using HCFA common procedural classification system (HCPCS) codes — not APCs — using the same claims forms they use now.

"Although to receive payment under the new system, hospitals will have to more fully code the services they furnish; they will not have to know to which APC the service is assigned in order to determine the payment amount," HCFA says. The agency published the payment rates applicable to each HCPCS codes in the final rule.

The regulation gives hospitals a 4.6% increase over current outpatient payments. Hospitals were expecting a 5.7% reduction in outpatient payments under the Balanced Budget Act (BBA) of 1997.

Still too little

Although the prospective payment system (PPS) payments have increased, American Hospital Association (AHA) officials in Chicago say they remain concerned.

Overall, hospitals are still in a hole compared with where they stood before the BBA. Before the law was passed in 1997, Medicare paid hospitals about 92 cents for every dollar of outpatient services performed, according to the AHA. The BBA cut that amount to about 82 cents on the dollar and threatened to lower it. The 1999 Balanced Budget Refinement Act stopped the decrease.

With the new PPS regulation, the amount of payment will go to about 86 cents to 87 cents for every dollar of outpatient services. That amount will decrease as transitional corridor payments are phased out, AHA officials point out.

During the transition period, through 2003, Medicare will pay hospitals a portion of any losses they would not have incurred under prior law. For rural hospitals with 100 or fewer beds, these losses will be replaced completely.

"The interesting thing is that when you design these transition mechanisms, you usually make them budget-neutral so that hospitals that are hurt get helped, but hospitals that are helped get pulled back a bit," Quinn explains. "The rule has a transition mechanism that only works one way — it only increases people's

payments, not decreasing some of them."

AHA officials are also concerned there isn't enough time to implement the system accurately. Specifically, they are concerned that providers will have difficulty obtaining software for the new rules and problems training staff.

Facilities still must face "tremendous operational issues that have not been mitigated through legislative efforts or comments submitted," Frazier says.

She points out that even the stated objective of the outpatient PPS was revised to capture HCFA's intent. "The primary objective of the hospital outpatient prospective payment system is to simplify the payment system and encourage hospital efficiency in providing outpatient services while, at the same time, ensuring that payments are sufficient to compensate hospitals adequately for their legitimate costs."

(HSS, a Hamden, CT-based software company specializing in coding, reimbursement, and profiling of health care services, is offering a detailed analysis of the final outpatient PPS on its Web site: hssweb.com/Insights/APCs.htm.) ■

Q & A Corner

E/M coding still confusing under final outpatient PPS

By **JoAnn Pata**, MS, RHIA, CCS
Health Information Management Consultant
HIM Professional Resources
Philadelphia

Q. The final rule of the outpatient prospective payment system (PPS) states: "Therefore, each facility should develop a system for mapping the provided services or combination of services furnished to the different levels of effort represented by the codes. . . . We will hold each facility accountable for following its own system for assigning the different levels of HCPCS [HCFA common procedure coding system] codes.

"As long as the services furnished are documented and medically necessary and the facility is following its own system, which reasonably relates the intensity of hospital resources to the different levels of HCPCS codes, we will assume that is in compliance with these reporting requirements as they relate to the clinic/emergency department visit code reported on the bill. Therefore, we would not expect to see a high degree of correlation between the code reported by the physician and that reported by the facility."

Does that mean coders would not use the HCFA/AMA (Health Care Financing Administration and American Medical Association) documentation guidelines developed to aid physicians in evaluation and management (E/M) code assignment?

A. According to this *Federal Register* reference, the HCFA/AMA documentation guidelines don't even come into play, in my opinion.

What system or methodology for E/M code assignment does HCFA expect hospitals to use? HCFA and the AMA developed documentation guidelines for E/M code assignment in 1994 because both providers and carriers had difficulty assigning and auditing the E/M services codes revised in 1992. If each facility will be held accountable for following its own system for assigning the different levels of HCPCS codes, who will determine whether a facility's own system reasonably relates the intensity of hospital resources to the E/M outpatient and emergency codes?

I urge coders to go to the beginning of this section, which deals with visit codes, to get the whole picture. It begins on p. 18,450, item 3, "Treatment of Clinic and Emergency Department Visits." In the discussion, HCFA states it had been concerned that certain hospitals' use of the lowest level code, CPT code 99201, to bill for all clinic visits would distort the data.

That, however, was HCFA's required reporting per the *Medicare Hospital Manual*. A facility could report codes 99201 or 99211 as an indicator or "flag" for a medical visit or had the option of reporting visits according to the specific E/M levels. Reporting a code from the five visit levels was not a requirement.

The discussion continues on p. 118,451: "We have developed the weights for clinic visits by using claims data only from a subset of hospitals that billed a wider range of visits rather than relying solely on claims with CPT code 99201. We chose to use this subset of hospitals (for this purpose only) because we do not know what CPT code 99201 indicates when hospitals use it exclusively to bill all visits."

Q. HCFA has developed the weights for visit codes found in this final rule from a subset of hospitals that used a wider range of visit codes. How did hospitals assign E/M codes in 1996, the year used for analysis?

A. From my consulting experience, some hospitals applied the HCFA/AMA documentation guidelines to determine the visit level. Other hospitals used the code for the E/M level found on the emergency department physician's encounter form used for billing professional services, and some hospitals applied a nursing classification system that was mapped to the existing E/M levels. I don't believe there has ever been a consistent approach.

The final rule continues, "We emphasize the importance of hospitals assessing from the outset the intensity of their clinic visits and reporting codes properly based on internal assessment of the charges for those codes, rather than failing to distinguish between low- and mid-level visits because the payment is the same. The billing information that hospitals report during the first years of implementation of the hospital outpatient PPS will be vitally important to our revision of weights and other adjustments that affect payment in future years.

"We realize that while these HCPCS codes appropriately represent different levels of physician effort, they do not adequately describe nonphysician resources. However, in the same way that each HCPCS code represents a different degree of physician effort, the same concept can be applied to each code in terms of the differences in resource utilization," the rule states.

To an HIM professional, that statement about assigning visit codes is most disturbing because it suggests a system that is not standardized across the board and that has the potential for abuse. HCFA is asking that codes be reported properly, "based on internal assessment of the charges for those codes. . . ."

Given the variation in charges from hospital to hospital, it could be possible that an emergency department record, for example, would be assigned to a higher E/M level at another hospital, even though the documentation is the same. The billing information hospitals report during the first years of implementation of the hospital outpatient PPS are vitally important to HCFA's revision of weights and other adjustments that affect payment in future years. But can it be meaningful when there is the possibility for broad variations in E/M level assignment, as the final rule suggests?

Finally, HCFA states, "In the same way that each HCPCS code represents a different degree of physician effort, the same concept can be applied to each code in terms of the differences in resource utilization." I agree that the same concept applied to the different levels of physician effort can be applied to differences in resource utilization. But how can a valid, proven method of doing this be developed by the implementation date? In my opinion, leaving each facility responsible for developing its own system can only lead to chaos.

Q. With this confusion, what would you recommend to hospitals?

A. According to the final rule on p. 18,451, coders will have to learn the mapping system their hospital decides to use, "which reasonably relates the intensity of hospital resources to the different levels of HCPCS codes."

I suggest looking to the American Health Information Management Association, the American Hospital Association, and the state hospital associations for direction in this area. With such a short time left before the July 1 startup, implementing a mapping system to the CPT E/M levels will probably be one of the greatest challenges hospitals will face.

[HIM Professional Resources can be reached at (215) 389-6777.] ■

Company offers computer access to hospital patients

Rentals have potential of decreasing hospital bill

Hospital stays may no longer seem as confining if a Jackson, MS, company has its way.

MediNet Rentals is offering inpatients the ability to access the Internet, read and send e-mail messages, view DVD movies, and play games in a filtered Web environment, all at T1 speeds, wirelessly.

Not only will the system offer entertainment, there is the potential to link it to the hospital's intranet so caregivers can input information at the bedside. And associations with corporate

sponsors and advertisers may reduce the daily cost of renting the computer, as well as potentially reduce a patient's hospital bill.

MediNet Rentals rolled out its plan in February at Baptist Health Systems in Jackson. Right away, the idea of having a computer in the room was a hit with the patients in the health system's acute care hospital. "Patients have told their nurses and their physicians [how much they like the system]. We've even gotten e-mails," says **Rick Caldwell**, Baptist's vice president and CIO.

Screening determines who's interested

Patients learn about the computer rentals at the time of admission. "We screen patients to see if we think they are a candidate for the computer," says **Georgia Rice**, Baptist's admissions team leader. "If they are, we tell them what the computer can do."

A computer is also in the waiting room, offering details about the rentals. MediNet distributes admissions flyers with information about the service. The computer in the waiting room "pretty much sells the rentals," Rice says.

If a patient is interested, he or she fills out a demographic sheet along with the admissions paperwork, listing hobbies and preferences. "It's customized for the patient," Rice says.

Admissions then calls a MediNet technician, who goes to the patient's room and teaches the patient how to use the computer, which is mounted on an over-the-bed table and rolls from room to room. The patient is assigned an Internet address and is given a headset, mouse pad, and diskette.

The computer is easy to use, especially for older people, Rice says. The company took away tool bars that some users might find confusing and replaced them with large icons that have basic instructions, such as "Click here to play a game," or "Click here to go to the Internet."

MediNet's standard rate for the daily computer rental is $19.95. The company technicians take payment by credit card or check. "Admissions is not involved in money collection," Rice says.

Even family members enjoy access

Many types of patients are interested in renting the computer, Caldwell says. "It's across the board, and it's not just the patient. It's the family member as well. A lot of times, the family member is the primary user.

Parents are especially interested in the computer, Rice says. "They are happy to give the children something to do." Some family members also welcome the ability to keep in touch with their workplaces, without having to tie up hospital telephone lines.

Caldwell says the hospital plans to eventually have a computer in each patient room. "Then we would make the computers available just like we do with televisions now. After patients get to their room, someone would come by and let them know [the service] was available."

Reducing costs through sponsorships

Although some patients may find the daily computer rental rate inexpensive already, **Bill Huff**, president and founder of MediNet, wants to reduce costs further through corporate sponsorships and advertisements. Eventually, such sponsorships might help reduce a patient's hospital bill, he says.

Corporate sponsorships will work by allowing patients to act as their own commissioned sales agents:

❒ Patients receive the names of the corporate sponsors from admissions, or they can access a list from their rented computer.

❒ If a patient decides to do business with a corporate sponsor, a percentage of that sale is set aside in a separate account for that particular patient.

For example, a patient might decide to switch his or her long-distance service to corporate sponsor MCI. MCI, which would have paid a sales agent $500 for that consumer, instead places that money into the account. The account is administered through an outside CPA firm and is not handled by MediNet.

❒ Those funds are then used to offset the cost of the computer rental.

❒ If money is left over, it can be used against the patient's hospital bill.

"By using the corporate sponsorship in that way, we are able to increase our penetration in hospitals that maybe would not ordinarily want or be interested in providing patients with computers," Huff says. MediNet is still developing the corporate sponsor list.

Consumers can prepare for a hospital stay by using corporate sponsors beforehand, Huff says. "We offer a MediNet number to people who would like to take advantage of building

this fund for themselves in case they are ever hospitalized."

Corporate sponsors pay nothing if they are not selected by the patients. Advertisers to MediNet Web pages, however, do pay fees. MediNet offers 10 slots on each wing's home page to advertisers that offer products to the floor's type of patients, such as maternity patients.

Preapproved advertisers

"We require that those particular advertisers already be doing business in the hospital with that product," Huff explains. "We won't be bringing products into the hospital that it doesn't approve of already." The list will appear on the patient's interface to the computer.

If MediNet is able to fill the advertiser slots, the cost of renting the computer each day will be nominal. "We would like to get the daily rate down to $5 or lower," Huff says.

Huff also sees the potential for caregivers to use the MediNet computers as a tool to improve patient care.

"Nurses can eliminate redundant or duplicate charting by having a computer in the room set up to access the hospital's intranet through a password-protected link," he explains. Physicians also can e-mail patients or show them information on the Web that relates to their care.

At this early stage, Caldwell doesn't know of any Baptist physicians that have used the computers to show patients health care Web sites. The topic has been discussed, however. "We were talking about that with one of our internal medicine physicians. He thought it was a great idea."

Caldwell says Baptist has just scratched the surface with the MediNet computers. "The potential is incredible." ■

GUEST COLUMN

New technology lowers LOS, saves $2.5 million

By **David Dillehunt**, CSP
Chief Information Officer
Cape Fear Valley Health System
Fayetteville, NC

Health care facilities and integrated delivery networks are continually challenged by heightened competition for patients and physicians, demands to decrease operating costs, and pressure to increase efficiency. One widespread solution to these challenges has come in the form of information systems technology.

Cape Fear Valley Health System (CFVHS) is a large, integrated health care delivery network comprising four hospitals, 16 primary care physician practices, and six specialty physician practices. It has experience with many of the obstacles common to health care organizations in the modern managed care environment.

To address these issues at Cape Fear, **George Binder**, MD, chief of radiology services, and I began to research clinical image management systems (CIMS), also known as PACS.

Our goal was to identify a CIMS that would provide two basic benefits to the health system:

1. We wanted a system that could provide superior access to clinical images and corresponding diagnostic information on an enterprisewide level. We decided that to have a tangible impact on the efficiency of the entire health system, our prospective CIMS must extend well beyond the borders of the radiology department and allow information sharing throughout the organization.

2. We wanted to sharply reduce film and film-related expenses within the radiology department. We associated a significant savings with the reduction of these expenses, although our primary concern was the efficiency of the overall enterprise.

The system we selected was ImageACCESS, a Windows NT-based CIMS from StorCOMM in Jacksonville, FL.

How the technology works

The CIMS performs four major categories of functionality:

• Acquisition functions capture images for use in the system.

(Continued on page 91)

DRG CODING ADVISOR®

Involve doctors *and* coders in improving clinical outcomes

Program helped slash complication rates

A creative and comprehensive project to bring physicians and coders together to better measure clinical outcomes has helped one Texas hospital slash its complication rate by dramatically improving the quality of physician documentation. But the changes leading to the turnaround weren't easy, and the fix wasn't quick. At the heart of the solution was the need to create an atmosphere of trust and understanding between physicians and coders.

Five years ago, Covenant Medical Center in Lubbock, TX, began a project to benchmark clinical outcomes data with peer facilities in Texas and the Southern region. Results from that project indicated that the medical center could improve length of stay, mortality rate, and cost and complication rates for at least some of the 25 top DRGs and procedures identified as being part of the hospital's strategic priorities.

The problem was, when the data were presented to the medical staff, physicians questioned their accuracy — particularly the accuracy of the complication rates, which were based on coded data entered into the hospital's data repository.

"Basically, our physicians had a tendency to blame the coders for data quality," says **Janice R. Noller**, RRA, CCS, CPHQ, quality improvement specialist in the quality management department at Covenant.

Back then, Noller says, the coders had been sending occasional notes to the physicians requesting clarification on certain coding issues based on the physicians' documentation in the medical record. "They met with resistance from the physicians. It may just have been a communications problem," she says. "Coders and physicians have a problem communicating anyway, no matter where you go. They speak different languages, and they have to reach a common language somewhere."

Reaching common ground was a difficult proposition, however, because the physicians blamed the hospital's coders for inflating complication rates by "just picking everything up as complications," Noller says.

"Evidently, there was not a whole lot of communication explaining to physicians when and why things are coded as complications. As a result, they felt that there were too many issues with the coding, the documentation, and the whole communication process. We felt there was definitely an opportunity there to investigate and see what was going on," she adds.

Ensuring data accuracy

It wasn't yet clear whether the hospital's high complication rates were driven by coding or by physician documentation. Quality managers wanted to ensure that data used in clinical outcomes monitoring were accurate and consistent.

To investigate the complication rates, they first sought to define the term and the codes to be monitored on an ongoing basis. They reached a consensus with the director of medical records and the coding supervisor to use the ICD-9-M code range 996.00-999.9 in calculating the facility's complication rate. In June 1996, a certified coding specialist was added to the quality management department to help with the project.

Noller used the hospital's decision support system to list every DRG for a six-month period

TOTAL CASES BY DRG

DRG	Complication Code	Complication Code Description	Total # of Comps	Total # Cases in DRG	Comp Rate per DRG
001	996.2	Mechanical Complication of Nervous System Device	1	78	1.28%
	996.78	Other Complication due to Other Internal Orthopedic Device, Implant, Graft	1		1.28
	997.02	Iatrogenic Cerebrovascular Infarction or Hemorrhage	1		1.28
TOTAL for DRG 001:			**3**	**78**	**3.85%**
002					
003					

Etc.
(Sample data only)

COMPLICATIONS RANKED BY DRG AND OCCURRENCE

DRG	Complication Codes										Total Comps
	998.1	997.4	997.3	998.89	998.2	998.5	997.5	997.1	998.3	996.62	
001				1				1			2
148	3	9	2	5	8	3	2	1			33
TOTALS	3	9	2	6	8	3	2	2			35

(Sample data only)

Source: Covenant Medical Center, Lubbock, TX.

and the number of complications in the 996.00-999.9 code range for each. **(See table for sample data, above, top.)** Then she looked at the total number of cases for each complication regardless of the DRG. **(See table for sample data, above, bottom.)**

After comparatively analyzing the two lists, she determined that her first priorities should be DRG 358 (uterine and adnexa procedures for nonmalignancy with CC, including hysterectomies), DRG 148 (major small and large bowel procedures with CC), and code 997.4 (digestive system complications).

Quality management performed an extensive medical record review on all the cases in DRGs 358 and 148 with the secondary diagnosis code of 997.4. As a result of that review, Noller identified two trends:

- Accurate code assignment had been made due to physician documentation of the term "postoperative ileus."
- A physician documentation pattern in discharge summaries was noted: "Patient's postoperative course was complicated by ileus."

Staff sought to determine if the clinical treatment of patients coded with this complication differed from those not coded with the complication. In most cases, those patients did not require more sources, additional length of stay, or additional monitoring. Given those facts, Noller questioned why the physicians documented the ileus complication in their discharge summaries. The physicians replied that the coding technicians weren't familiar with the clinical aspects of ileus, as well as other conditions that commonly occur postoperatively but aren't necessarily complications, such as atelectasis, hemorrhage, hematoma, and fever.

"The physicians were very adamant that some of the things that the coders were coding as complications were actually clinically things that normally occur after an open abdominal procedure,"

(Continued on page 90)

Chart Review for Coding of Complications

Goals

1. To determine accuracy of ICD-9-CM codes in the database as they relate to complications of surgical and medical care and the medical record documentation of those complications.
2. To determine possible trends in other related information as requested by QM Department, physicians or others, as needed.

Determine Assignment based on:

1. Pathway Presentations
2. External Benchmarking
3. Target DRG's
4. Core Business Groups
5. Other DRG's based on QM Tracking Charts

↓

Run Encounter report on TSI to obtain baseline information and patient Medical Record Number.

↓

List Medical Record Numbers in Terminal Digit order to pull records more efficiently.

↓

Record basic information from the Medical Record into the Complication Analysis database.

↓

Read the patient's H&PE for Reason for Admission and any chronic conditions undergoing continuous treatment.

↓

Read Operative dictations for documentation of potential intraoperative complications.

↓

Read Progress Notes for any potential postoperative complications and the accuracy of the documentation.

↓

Review Discharge Summary for documentation accuracy of any identified complications.

↓

Compare Medical Record documentation of any complications with the ICD-9-CM code assignment.

↓

Research as needed the coding guidelines or clinical information in the ICD-9-CM codebook, Coding Clinic, or other references as needed.

→

If the Coding Technician code assignment does not accurately translate from the documentation, document suggested codes or action in Complication Analysis database and attach copy of database worksheet to chart.

↓

Refer the record to the Coding Supervisor for review.

↓

Coding Supervisor will refer record to appropriate Coding Technician who will also review and make any revisions needed, with response on same database worksheet.

↓

When the record returns from the Coding Section, the QM CCS will enter the Coding Technician response into the Complication Analysis database.

↓

If any trends are noted in the database results, the QM CCS will refer them to the Coding Supervisor, who will discuss with the Coding Technicians at their monthly meetings.

↓

Any continued non-resolution of the coding issue will be referred to an outside authority, i.e., Coding Clinic.

↓

No coding issues will be discussed outside of QM until responses are returned from the Coding Technicians.

↓

Vague documentation resulting in potentially inaccurate code assignment will be noted in the Complication Analysis database.

↓

Summary of findings are made based on any trend noted in the review and the goals of the assignment.

↓

Findings and recommendations are reported to Medical Staff specialty meetings or others as needed.

Source: Covenant Medical Center, Lubbock, TX.

Noller says. Meanwhile, "[the coders] wanted me to be able to go to the physicians on a regular basis and say, 'These are the data, this is why they appear this way, and this is what we'd like you to do to help the coders. Meanwhile, the coders will try to help you in understanding why they're asking what they're asking for.' This was not an overnight process. It was probably anywhere from a year to a year and a half before I even got a few physicians to finally give me some positive responses."

One of the biggest obstacles to improving the communication process was the physicians' idea that the coding of a complication meant they had done something wrong. Noller reports that it took almost a year to convince them otherwise.

To facilitate greater cooperation among the physicians and coders, Noller initiated a three-pronged action plan:

1. She started a coding newsletter in January 1997 to improve communication and educate the medical staff, their office staffs, and hospital staff on coding and documentation issues. Noller writes the newsletter, titled *Quality Notes*, which is edited by a physician champion. Currently, the newsletter has expanded its focus to include other health care issues, such as case management, fraud and abuse, and state and federal health care legislation. About 1,000 copies are distributed every other month.

2. Noller formed an ad hoc group of physicians to work with her and the coding supervisor to determine a set of basic clinical guidelines to assist the coding technicians in making decisions when it came to coding a condition as a complication. The group concentrated on the "complications" regarded as problematic by the physicians: ileus, hemorrhage, hematoma, atelectasis, and fever. The group was formed about the same time the newsletter was launched, six months after Noller came on board at Covenant.

"I thought that a six-month period was pretty good, to get these docs willing to work with us instead of being antagonistic," she says.

3. A few months later, Noller helped to develop a coding subcommittee of the hospital's resource steering committee. The resource steering committee handles information management for the entire facility, including medical records, coding, and data quality.

"It was felt that because of all the coding and billing issues out there, a coding subcommittee would be useful in discussing these issues and working through them," Noller says.

Also, a process was formalized for referring coding discrepancies found on medical record reviews performed by the quality management department. **(See flowchart illustrating the chart review process, p. 89.)** Two databases — one to assist in communicating coding and documentation trends from quality management to medical records, the other to help quality management keep track of all individual record reviews and results — were also constructed.

The results so far have been dramatic. For example:

- Within six months, the incidence of code 997.4 in DRG 358 decreased from 12.6% to 3.03%. A further review discovered that physician practice patterns in documenting ileus as a complication had changed.
- As a result of the various education efforts directed toward physicians, doctors are now actually requesting presentations on coding guidelines.
- Noller reports that the quality management department now believes the data used in clinical outcomes monitoring and reporting are much more accurate and consistent.

"I think the physicians are starting to understand where the coders are coming from," Noller says. She credits the hospital's medical staff leadership for helping to facilitate the change. "Our medical director of quality improvement has always been able to work with our other medical staff leaders to get the medical staff involved in quality improvement housewide."

Also helpful was a medical staff leadership group called the Clinical Outcomes Improvement Team, made up of physician section chiefs. "They were the first to hear some of this information," Noller says.

"At the time, they were concerned from a monetary standpoint, because our hospital was undergoing talks of a merger with one of our main competitors. Administration was saying, 'Listen, guys, if documentation will help improve our financial picture, then that's what we need to do.' Like every other quality initiative, it has to start from the leadership on down. So, through that leadership role and our physician champions, and showing the physicians that it's not just the hospital that's affected but their office and business health as well, it finally sank in a little bit," she explains. ■

(Continued from page 86)

• Storage functions store and file electronic images.

• Retrieval and distribution functions move images to the end user.

• Display functions allow the user to review images.

At CFVHS, the CIMS acquires images from CT, magnetic resonance (MR), ultrasound, and plain film via film scanners. The CT and MR devices at the medical center are DICOM-compliant modalities. DICOM (digital imaging and communications in medicine) is a standard protocol that formats image information at the device level.

The CIMS can use raw and processed DICOM data directly imported from those devices. The CIMS acquires images from the non-DICOM-compliant devices via its image capture software. Both DICOM and the image capture software acquisition interfaces result in an electronic collection of data that contains all the clinical images in the exam and associated patient information. Users also can add reports, annotations, or comments.

I calculated a drop in total direct costs for those patients treated, between the two three-month periods analyzed, that showed a savings of $647,000, or $2.5 million per year.

Electronic exams are stored on a centralized electronic database. The image server is a traffic cop for the entire system, processing requests and retrieving / distributing exams on demand. Images are processed and uncompressed in two phases.

The system initially stores image information on RAID (redundant array of inexpensive drives), a series of high-capacity hard drives allowing fast access speeds. After seven days on RAID, exams are transferred to less expensive archive storage media. We chose a seven-day active period since demand for exams is considerably less after one week. We currently use two types of archive storage: WORM drives (write once, read many) and a magneto optical jukebox. The two-phase storage strategy is a compromise between slightly slower access speeds and less-expensive storage media.

The CIMS retrieval and distribution mechanisms are built on an open client / server architecture. Display stations located throughout the medical center run the CIMS' view station software. We currently have stations in radiology, emergency medicine, the operating room, and five intensive care units — surgical, medical, coronary, neonatal, and cardiac surgery.

The view station software can be customized based on user name, so that no matter where a user logs on to the software, he or she will encounter the same interface.

As I watched the impact of the CIMS on the radiology department, it became apparent that other areas, specifically the intensive care units, also were benefiting from the new technology. I decided to conduct a study measuring the effectiveness of the CIMS in other areas of the medical center.

As decreased patient length of stay (LOS) is a good indicator of increased efficiency and revenue opportunities and of dollars saved by the facility, I designed the study to compare the average LOS in three intensive care units — in two similar pre- and post-implementation periods. I theorized that real-time access to clinical images and related diagnostic information would contribute to a reduction in LOS.

I audited the LOS for 1,306 patients who had been admitted to the surgical, medical, or coronary intensive care units. Approximately 632 patients had been admitted during a pre-implementation span from December 1997 to February 1998, and 674 had been admitted during the post-implementation span from December 1998 to February 1999.

After the results had been analyzed, we found that a decrease of .75 days had occurred from a 10.09 day average in the pre-implementation period to a 9.34 day average in the post-implementation period. We also proved, with a 95% statistical confidence level, that this reduction was not a coincidence.

Even more encouraging were the results we obtained by applying cost-accounting methodology to the LOS numbers. Using this method, I calculated a drop in total direct costs for those patients treated, between the two three-month periods analyzed, that showed a savings of $647,000, or $2.5 million per year.

Our methodology measured all direct costs that comprise patient care, such as unit staffing, actual procedure costs, and supplies. Indirect (overhead) costs such as electricity and administration were not taken into account. That was

accomplished at a time when the case mix index actually rose by 6.8%, meaning that the patients were actually sicker.

A previous study, conducted by Carmen Perri, an ultrasound supervisor at CFVHS, also demonstrated additional savings to the health system resulting from the use of the CIMS. This study showed that the savings and increase in productivity brought about by the CIMS were projected to increase revenue in the ultrasound department alone by nearly $1.2 million per year.

Combining the results of these two studies produces an annualized benefit of $3.7 million — $1.2 million in increased revenue and $2.5 million in actual reduced costs.

That figure does not take into account areas where savings are presumed but not yet quantified, such as the radiology department in general or the emergency medicine department. In any case, $3.7 million represents a phenomenal return, given an overall investment of approximately $2.3 million in the CIMS system.

The future of the technology

There is no question that information systems are a necessity in the modern health care industry. Electronic clinical image management has allowed us to share information on demand throughout the health system; improve work flow, and increase our efficiency; decrease our operating costs and increase our revenue enhancement opportunities; and enable us to compete for physicians and provide the highest caliber of patient care.

CIMS is the next generation of technology, allowing health care organizations to apply the benefits of information systems to clinical images. In my opinion, CIMS will soon be indispensable to the health care enterprise. ■

AMA releases principles to guide its own Web sites

Visitors must volunteer to provide personal data

Health information management personnel who want to create principles governing the privacy of their Web sites and those used by hospital staff now have another reference source.

In March, the American Medical Association (AMA) in Chicago issued a set of guidelines governing the editorial content, advertising, sponsorship, privacy and confidentiality, and secure electronic commerce for its Web sites. While these guidelines were developed for the AMA Web sites and visitors to these sites, they may be useful to other providers and users of medical information on the Web, authors of the principles say.

The guidelines' writers note that access to the Internet has the potential to speed the transformation of the patient-physician relationship from that of a physician authority ministering advice and treatment to that of shared decision making between patient and physician.

AMA developed the principles in response to the barriers that impede this transformation, such as "wide variations in quality of content on the Web, potential for commercial interests to influence on-line content, and uncertain preservation of personal privacy."

"[The AMA guidelines are not designed to be] global, in the sense of being international, and encompassing, [as are the] International e-Health Code of Ethics [offered by the Internet Healthcare Coalition in Washington, DC]," says **John Mack**, coalition president.

"For the most part, the AMA guidelines are very specific for AMA publications and Web sites, and while there are many common points, these guidelines could not be expected to be followed by all health Web sites.

"As I see it, other guidelines are more narrowly focused on a particular industry or for a more specific purpose," he adds. "I believe that additional guidelines may be developed by other 'special interest' groups, but that those guidelines will look to ours as the model and/or the overarching set." **(For more information on the Internet Healthcare Coalition's guidelines, see *Hospital Payment & Information Management*, May 2000, p. 68.)**

Be aware of third parties

Like the Internet Healthcare Coalition, the AMA is concerned about Web site visitors' rights to privacy. The association plans to protect their rights in these ways:

1. A link to the privacy policy of the Publications Web site should be provided on the home page or the site navigational bar and should be easily accessible to the user. The Publications

Web site should adhere to the privacy principles posted.

2. Individuals responsible for Web sites that post advertising should be aware of current technology and access possessed by third parties that post or link to advertisements. Web sites should ensure that the technology and access used by third parties adhere to the Web site's privacy policies.

3. The site should not collect name, e-mail address, or any other personal information unless voluntarily provided by the visitor after the visitor is informed about the potential use of such information.

4. The process of opting in to any functionality that includes collection of personal information should include an explicit notice that personal information will be saved, with an explanation of how the information will be used and by whom. The opt-in statement should not be embedded in a lengthy document and should be explicit and clear to the viewer.

5. Collection, retention, and use of nonmedical personal information about site visitors may be offered to viewers when the AMA believes that such information would be useful in providing site visitors with products, services, and other opportunities, provided such use adheres to these principles and is within bounds of current regulations and law. *(For more information, go to http://www.ftc.gov/privacy/index.html.)*

Opting out

Individuals may agree to have such nonmedical personal information collected or may choose not to, with the understanding that opting out of having such information collected prevents the site from being tailored to their particular needs and interests. Such information will not include personal health information, such as any information about medical conditions or medications purchased.

6. Names and e-mail addresses of site visitors should not be provided or released to a third party without the site visitor's express permission.

7. E-mail information, personal information about specific visitor's access and navigation, and information volunteered by site visitors (such as survey information and site registration information) may be used by the site owner to improve the site but should not be shared with or sold to other organizations for commercial purposes without express permission.

8. The AMA will use e-mail addresses voluntarily provided by site visitors, to notify them about updates, products, services, activities, or upcoming events. Site visitors who do not wish to receive such notifications via e-mail should be able to opt out of receiving such information at any time.

9. The AMA has licensed its physician and medical student list to third parties for more than 50 years. This information is licensed to database licensees under strict guidelines. The names and addresses of physicians in the AMA Physician Masterfile are made available only for communications that are germane to the practice of medicine or of interest to physicians or medical students as consumers. E-mail addresses are excluded from such licensing agreements.

Nonidentifiable Publications Web site visitor data may be collected and used in aggregate to help shape and direct the creation and maintenance of content and to determine the type of advertisement to be seen by site visitors while on the AMA site.

What is a cookie?

10. The AMA will not collect and will not allow third parties to collect personal medical information (medical conditions, health-seeking behaviors, and questions, and use of or requests for information about drugs, therapies, or medical devices) without the express consent of the site visitor after explanation of the potential uses of such information.

11. A cookie is a small file stored on the site user's computer or Web server and is used to aid Web page navigation. Two types of cookies are commonly used:

— A session cookie is a temporary file created whenever a Web site is accessed and is self-terminated based either on an expiration date (such as three hours from creation of the cookie) or by closing the Web browser.

— A persistent cookie is a permanent file and

must be deleted manually.

Cookies referred to in the context of these guidelines are persistent cookies. A cookie function may be used on the site to track visitor practices to help determine which site features and services are most important and guide editorial direction.

The cookie makes it possible for the user to access the site without requiring entry of a user name or password, allows the user to view different restricted areas of the site without re-registering, allows the user to personalize the site for future use, and permits the user to make subsequent purchases without reentering credit card information.

Users who do not desire the functionality created by the cookie should have the option to disable the cookie function, either by indicating when asked that they do not wish to have a cookie created or by disabling the cookie function on their browser. Individuals should be able to opt out of cookie functions that permit tracking of personal information at any time.

12. At this time, the AMA Publications Web sites do not use persistent cookies. Users will be notified if and when AMA Publications Web sites begin using persistent cookies, as specified in these guidelines.

13. E-mail messages sent to a Web site might not be secure. Site visitors should be discouraged from sending confidential information by e-mail. Site visitors sending e-mail accept the risk that a third party may intercept e-mail messages.

14. Market research conducted by the site or its agent to enhance the site should be clearly identified as such.

15. E-mail alerts and newsletters should contain an "unsubscribe" option.

(To view the principles in their entirety, visit AMA's Web site at pubs.ama-assn.org/ama_web.html.) ■

NEWS BRIEFS

Six groups agree to HIPAA standard-setting protocol

Six standard-setting organizations signed a memorandum of understanding (MOU) on March 31, agreeing to cooperate and communicate on implementation of electronic transactions standards adopted by the Department of Health and Human Services (HHS).

The 1996 Health Insurance Portability and Accountability Act (HIPAA) mandates HHS to adopt standards that will help reduce the costs of administrative and financial transactions in the health care industry. The development of maintenance and updating protocols for these standards has been one factor delaying publication of a final rule, now expected out this month.

The standards groups currently include the Accredited Standards Committee X12 in Alexandria, VA; the Dental Content Committee in Chicago; Health Level Seven in Ann Arbor, MI; the National Council for Prescription Drug Programs in Phoenix; the National Uniform Billing Committee in Chicago; and the National Uniform Claim Committee in Chicago. Other organizations may be added in the future.

The MOU establishes a process that will allow "a single entry point" for requesting changes to HIPAA standards, for the request's evaluation, and for a response to the request to be sent to the National Committee on Vital and Heath Statistics in Washington, DC, for review and HHS for adoption, according to the Medical Group Management Association in Englewood, CO.

Several issues, such as providing for ongoing funding for Web site maintenance and the timing of changes, must still be ironed out. Each of the standards groups, though, now has in place an important vehicle for modifying or adding to HIPAA-mandated standards. ▼

Web site offers career help for health care pros

A new on-line resource is available to help health care professionals with confidential job searches, resume building, and networking.

MedCAREERS allows health care job seekers and their potential employers to review an on-line

database of jobs and resumes devoted exclusively to their specialty area.

The Web resource offers on-line features such as customized search and sorting tools, resume building, messaging centers, and automated management of job postings.

At its launch, MedCAREERS already had posted more than 10,000 positions for physicians, clinicians, nurses, pharmacists, administrators, and allied health professionals. In addition, the site had a resume database of more than 4,500 resumes.

(For more information, go to: www.medcareers.com.) ▼

There's help for hospitals that rely on Medicare

An independent panel of experts has added its voice in support of increased Medicare payments to hospitals.

The Medicare Payment Advisory Commission (MedPAC) in Washington, DC, has called for an annual increase in Medicare inpatient hospital payments — the so-called "update factor" — of more than twice the current law. This action recognizes the need for Medicare to keep pace with the high cost of providing health care today.

The high costs of new drugs and new technology for hospitals are said to have influenced MedPAC.

"The expert's recommendations add weight to what we've been hearing from hospitals across the nation: their ability to care for patients is being severely jeopardized," says **Rick Pollack**, executive vice president of the American Hospital Association in Washington, DC. ▼

OIG report finds problems with billing software

Although Medicare claims software written for commercial distribution to a large audience poses little risk of producing erroneous or false claims, proprietary software appears more likely to pose some risk of misuse or fraudulent use, according to a report released by the Office of the Inspector General (OIG) in Washington, DC.

The OIG had decided to review software literature and claim preparation processes because of the vast numbers of claims that were being electronically submitted to Medicare.

The report, "Medical Billing Software and Processes Used to Prepare Claims" (OEI-05-99-00100), found many potential problems with the submission of the claims, including these:

- Medicare cannot identify most of the clearinghouses and billing agencies submitting claims into the Medicare systems since most use the physician's or medical supplier's billing number and submitter number.
- Medicare can't determine whether claims enter its system from an authorized biller's site

Hospital Payment & Information Management™ (ISSN# 1074-8334), including **DRG Coding Advisor**®, is published monthly by American Health Consultants®, 3525 Piedmont Road, N.E., Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Hospital Payment & Information Management**™, P.O. Box 740059, Atlanta, GA 30374.

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Editor: **Sue Powell Coons**, (614) 848-5254, (suby33@aol.com).
Group Publisher: **Brenda Mooney**, (404) 262-5403, (brenda.mooney@medec.com).
Editorial Group Head: **Coles McKagen**, (404) 262-5420, (coles.mckagen@medec.com).
Managing Editor: **Lee Landenberger**, (404) 262-5483, (lee.landenberger@medec.com).
Production Editor: **Ann Duncan**.

Editorial Questions

For questions or comments, call **Lee Landenberger** at (404) 262-5483.

and computer or from unauthorized sites and computers.

• Billing companies, their employees, and employees of providers have access to patient and provider information needed to access the Medicare system.

According to the report, the Health Care Financing Administration in Baltimore has taken a "step in the right direction" by creating a new computer system, the Provider Enrollment, Chain and Ownership System (PECOS). The OIG made these further recommendations in its report:

• Identify and register all clearinghouses and third-party billers. This would provide an audit trail.

• Improve safeguards to ensure that electronic claims are accepted only from authorized sites and terminals.

• Educate the provider community about its liability for erroneous claims submitted to Medicare using their provider number(s). ▼

AHIMA sponsors special HIM research program

The American Health Information Management Association's (AHIMA) Foundation of Research and Education (FORE) in Chicago is offering a Grant-in-Aid Research Program, which financially supports applicants conducting research of theoretical and practical aspects of health information practice.

Eligibility for the Grant-in-Aid Research award requires that the primary or secondary investigator must be an active, associate, or student member of AHIMA. Recipients are limited to one funded grant per year. Grant funding may be requested for supplies and expenses but may not be used for salaries, indirect costs, wages or for product development.

Submissions required include: details regarding the research objectives, methodology, and evaluation systems; the problem / hypothesis behind the research; and a detailed work plan. Researchers are encouraged to submit topics in their established areas of expertise. In cases where the proposal is a resubmission, the applicant must include a summary of how the deficiencies cited in the original application have been addressed in the resubmitted application.

The deadline for submissions is Sept. 29. Award notifications will take place within three months of the application deadline. The total amount of funding to be awarded in 2000 is $50,000. Grant-in-Aid Research awards are expected to range from $5,000 to $20,000.

To receive a Grant-in-Aid Research application, visit AHIMA's Web site at http: / / www.ahima.org and follow links to "FORE" and then to "Grant-in-Aid."

AHIMA members can also call the association's Fax Link at (888) 424-4040 and request documents 505 and 506. For more information contact Alison Feinber. Telephone: (312) 233-1168. E-mail: alisonf @ahima.org. ■

CALENDAR

• "Bringing the Future Into Focus" — American Association of Health Plans' Managed Care Institute & Display Forum, is scheduled for June 4-7 in Orlando, FL. For more information, call the AAHP customer service action center at (877) 291-AAHP (2247).

• The "Emergency Conference on Final Hospital Outpatient PPS Regs" will be held June 12-13 in Washington, DC. For more information, call (800) 260-1545 or visit the Web site www.ucg.com / health / conferences / PPS.html. ■