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Trends, user reviews, intelligence, and news on health care information systems

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In An Upcoming Issue:

Dealing with Vitalworks...Not as tough as standard contract.

MS Office: two hospitals used it to build key applications that fill needs between the modules of their clinical systems.

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Cerner, Pyxis Systems Helped Catch Murderer...
Beware: Psycho Killers Like Computers, Too

Clinical information systems from Cerner and Pyxis are key to the case of Charles Cullen, the registered nurse who is accused of, and who admitted, overdosing patients at 315-bed Somerset, N.J., Medical Center.

One can reasonably ask why the reporting capabilities in these systems didn't highlight his deadly behavior sooner. But on the other hand, officials investigating the case say documentation from the two systems has helped to make their case. Given the fact that another case against the slippery alleged serial killer failed last year for lack of evidence, that's a big benefit.

Mr. Cullen was charged last month with one murder and one attempted murder after lab records showed drastically elevated levels of the heart-regulating medication Digoxin in half a dozen patients. He then briefly began to talk, claiming responsibility for 30-40 deaths over 16 years, including 12-15 in a year at Somerset.

The killing spree spurred calls **(see "Psycho Killer,".page 6)**

Were Hospitals, Vendors Gouged On Travel By Some Major HIS Consulting Firms?
...No Vendor Yet Known To Have Played This Game

Lawsuits have been filed alleging that PriceWaterhouse Coopers (PWC) secretly profited by changing its travel discount plans from price discounts to a plan under which it charged clients -- including health care IT clients -- face value for airline tickets, then took and pocketed back-end rebates during the late 1990s and early 2000s.

Some other major consulting firms may have had similar practices. Both Ernst & Young and KPMG acknowledged that they had used end-of-term rebates for some time before 2002, and were switching back to the visible, up-front discounts for travel. Both said their past practices benefited clients.

In September, 2003, we warned electronic subscribers in a brief e-mail opinion piece about these practices. In retrospect, that

(continued on next page)

brief opinion piece, titled, **"Scrutinize Your Vendors' and Consultants' Travel Claims – And Tighten Up Your Terms,"** should have gone to all subscribers. It referred to a prior W.S. Journal news report saying that such rebate schemes had turned travel to client locations from a basically break-even function into a significant profit center at clients' expense.

Yes, it did happen in health care...

A Jan. 5, 2004 Wall Street Journal article quotes documents from lawsuits over Price WaterhouseCoopers' travel rebate schemes. The article also quotes a former director of PWC's' health care practice in Chicago, Jean Joslyn -- an Inside Healthcare Computing reader.

We contacted Ms. Joslyn for this article and commentary. In health care, she said, PWC consulting proposals promise in writing to make every effort to seek travel savings, and say that these savings will be passed on to clients.

When PWC changed from ticket price discounts to back-end rebates, fares on many of Ms. Joslyn's frequent Chicago-to-Philadelphia trips to a large health care client (not a hospital, she told us) rose $200 each.

In February 1999, she contacted the PWC travel director, James F. Lennon, and asked how the rebates would be allocated back to clients. His response, in part: "We negotiate these discounts, not our clients." Dismayed by that answer, she contacted the firm's corporate ethics department. Her ethics complaint led to a meeting of PWC's top management in New York on March 19, 1999. These executives reinstated a 12.5% up-front discount on ticket prices charged to clients.

PWC execs didn't tell either Ms. Joslyn or clients that "total discounts, including back-end rebates, in some cases would continue to be as high as 40%," so the firm continued to reap big profits on tickets, the Journal article said.

Then, in 2000, a lawyer in a PWC office in Los Angeles, Neal Roberts, began raising the issue anew. His complaints led to lawsuits and a federal civil investigation. Then, starting Jan. 1, 2001, PWC again changed its policy, to a flat 28% front-end discount on air fares charged to clients, saying it would keep 8% in year-end rebates to cover its costs. PWC again decided not to reimburse clients for millions of dollars in rebates from prior years. So the lawsuits continue.

Other major firms may have had similar practices. The Journal article said that both Ernst & Young and KPMG changed their practices away from end-of-term rebates in 2002; both claimed that their former practices benefited clients. The Journal reports E&Y said it now charges face value and also charges clients a surcharge for "administrative" costs of air travel.

Ms. Joslyn is now with Cardinal Consulting, a small but fast-growing firm of long-time HIS consulting professionals organized by Frank Cavanaugh, former head of healthcare IT practices at both Coopers & Lybrand and PWC. Cardinal's policy: it negotiates the lowest travel costs it can, passes on these discounts in full to clients, and doesn't charge administrative fees or keep a back-end percentage, Mr. Cavanaugh said. "Travel is just a cost of doing business...I think most small consulting firms operate this way." Cardinal: (708) 645-1235, www.cardinalconsulting.org.

IDX, Allscripts, Misys Helped Sharp

Our Dec. 15 article on vendor charity mentioned that the folks at Picis Corp. collected money for fire victims who are employed by Sharp Healthcare, San Diego, Calif. CIO Bill Spooner asked us to add that Sharp also received substantial contributions from IDX, Allscripts, and Misys.

CIOs: We Have Best Job In Healthcare

At a recent regional HIMSS meeting, someone asked panelists what their experience as hospital CIOs had prepared them for in their next

career moves. He might as well have posed the question to a panel of Supreme Court Justices.

"This is the best job in healthcare," said Mike Sauk, CIO, City of Hope National Medical Center. Tim Kirk, CIO, Huntington Memorial Hospital, echoed the sentiment, as did Bob Blades, CIO, Loma Linda University Medical Center. "I wouldn't want to do anything else."

The three were among the five veteran CIOs who spoke about their CIO careers at a recent meeting of the Southern California Chapter of the Hospital Information Management and Systems Society. The others were Tim Moore, IT outsourcing account executive; Saint Joseph Health System, Anaheim; and Dan Robins, CIO, Providence Healthcare, San Fernando Valley. The panel was moderated by Jack Schlosser, who heads the health services practice at Spencer Stewart, a Los Angeles-based executive search firm. Here's what emerged:

• **No particular degree or training track.** Not one was classically qualified for his big early career advancements into healthcare IT. Mr. Blades's background was in aerospace engineering and software sales. Mr. Robins had an advanced degree in finance and marketing. Mr. Kirk had an advanced degree in computer technology, but knew little about management.

It's almost as if the way to become a CIO is to "not to be qualified for any of the promotions along the way," said Mr Sauk, who once aspired to be a high school speech teacher. "The common thread" is that "somebody once saw something in us that gave them faith we could do the job."

• **They all took risks.** Mr. Moore was an RN, who'd worked a while for SAIC when he was offered a project management job implementing a revenue management system at Northridge Hospital. "What did I know about project management?" Mr. Sauk was once offered a job as an accounting manager. "I had never had an accounting course in my life." He accepted.

Mr. Kirk has a degree in math, and earned the first graduate degree in computer sciences at the University of Washington. He went to work in the small computer department at Sacred Heart Hospital, Eugene, Ore. (now part of Peace Health.) Three years later, the department needed a manager. "I went up to administration and said -- 'Hey, I'm your man. I'm the best you could get.'" He got the job. "My entire goal was to just survive for 18 months."

It is when you take on the difficult challenges that the outcome, positive or negative, that your results are most noticed, noted Mr. Moore.

• **Surviving**. The world of a CIO is treacherous. "In the house of Cs (CEO, COO, CFO, CIO) you become very political," Mr. Blades said. "One big failure, and you're gone." Everyone wants your job. Physicians want it. Hospital administrators want it. COOs want it.

Tips for hanging on to CIO job

From Mr. Kirk: Read Leading Geeks, by Paul Glen and David Maister. It deals with the difficulty Fortune 500 companies have with dealing with the creative and technical side of business. "I really recommend that book."

From Mr. Blades: Before you plunge into a major project, make sure you have "all of your Cs lined up," Mr. Blades urged. He is trying to get a clinical systems back on track "for the second or third time." The CFO is on board. The operations staff has bought into it. The CEO has issued a memo in support. But the CMO has reservations. Mr. Blades is waiting and wooing her. "It takes time and patience and skill."

He also says: Learn to speak in the language of whomever you are addressing. "When I am talking to the board, my message is very positive." When it is finance "I am value-driven." "I have used every sales trick, gimmick,

technique that I ever learned in my current job."

From Mr. Sauk: Hospitals change CEOs often. Evaluate each regime change as a new job opportunity. Whatever you've done up until now "doesn't matter...You reinvent yourself every time you get a new boss."

Advice for those on the way up

Choose the right job to begin with. Corporate culture varies widely, warned Mr. Kirk, who has worked for seven different healthcare organizations. Some of it is "very bad," and whatever it is, you are not going to change it. "You must fit in, or get out."

Mr. Robins agreed. Scandals that brought down management at Enron and HealthSouth might have been predicted by a close examination of those companies' corporate cultures, he said. But you, as a job applicant, can't possibly assess a corporate culture in a 60-minute job interview.

His advice: Find the right people beforehand, and ask the right questions to get an honest assessment of the corporation's culture.

What they look for in the people they hire:

"A global view," Mr. Moore said. He said he "often" turns down exceptional individuals if all they offer is "niche talent." Results-oriented people, Mr. Sauk said. CIOs who survive deliver their project on time and on budget, so "I look for people who have a history of performance."

Clinical background is also becoming more important in IT. Two of Mr. Kirk's four managers are clinicians. Nowadays "clinicians drive business decisions," Mr. Robins said. "I keep my license current," Mr. Moore said. It is not clinical understanding that helps him, as much as a thorough understanding of the business processes that nursing goes through.

Physician E-Mail Catching On

Under pressure from patients, many MDs are overcoming resistance to electronic communication, but encountering complex choices in selecting the right tools, says a new report, "Online Provider Communication Tools," written for the California HealthCare Foundation (CHCF) by First Consulting Group.

"Contrary to persistent misconceptions," many MDs find that "online communication is manageable, improves productivity, and can even generate revenue," said the report's author, Keith MacDonald.

Half a dozen payers are pilot-testing payments to physicians who communicate with patients by e-mail. Aetna and United Healthcare, Blue Cross-Blue Shield of Massachusetts, Blue Shield of California, ConnectiCare, First Health, and Horizon Blue Cross-Blue Shield of New Jersey have recently completed or are planning projects to test reimbursements for e-mail consultations. CIGNA, Health Net (Connecticut) and Pacificare (California) are considering it.

Blue Shield concluded that it could save up to $4 million per year in office-visit claims if more physicians adopted e-mail communication with patients.

All of the pilot programs reimburse $20-$25 per e-visit. Blue Shield of California reimbursed at a flat $20 per e-mail during a 2002 pilot involving 250 MDs and 2,000 patients.

Inside Healthcare Computing dug into its own records and learned that during 2003, Blue Cross of California was reimbursing as little as $33 for an office visit by a family practitioner. A neurological exam, including a brief physical, earned a board-certified neurologist just $55. At these rates, it seems quite likely that an MD could make more money answering patient e-mail, when it's an appropriate alternative to seeing the

patient, particularly factoring in scheduling costs.

The 30-page report also provides a detailed review of electronic communication tools; case studies on how single, multi-site, and integrated delivery systems use these tools; and lists of vendors providing e-mail communication. It also gives a detailed look at roadblocks that prevent MDs from hopping on board more enthusiastically. It's available at no charge from California HealthCare Foundation, www.chf.org.

Be Sure Electronic Medical Record System Offers PDA Support

If you're looking for an electronic medical record system, be sure to question your vendor closely on the issue of PDA support. A number of vendors offer EMR functionality which is top-drawer for desktop, remote, and wireless users, but either don't have portable-device support or offer very limited functionality.

This information comes AC Group's 2003 Electronic Medical Record Survey. The data is consistent with its 2002 results, when 47% or vendors didn't offer PDA devices with their EMR systems.

AC Group's assessments are based partly on self-reports by 34 vendors, which answered product inquiries on more than 3,400 functions. Mark Anderson, the former CIO who heads AC Group, then applied his own testing matrix to the top 10 finishers. The result is 120 pages of system selection guidelines and product ratings. Some results track well with KLAS Enterprises (both, for example, give high ratings to NextGen), but they're derived differently; KLAS relies almost exclusively on user reports, while AC Group seeks vendor assessments of their own products. Some highlights:

• Top honors: For the second year in a row, Mr. Anderson gives top honors overall to EMRs from NextGen Healthcare Information Systems, Inc., and Allscripts Healthcare Solutions. JMJ was also among the top three finishers. Each had 93-94% of the functionality required by the AC standard.

• MedInformix, Praxis, eClinicalworks, Imedica, and A4 Health Systems make the second tier, in that order.

• PMSI, Greenway, GE Medical, and Misys come in next, again in that order.

• Chartcare, eMDS, and Cliniflow anchored the bottom of the top 15 finishers.

• The sixteenth place finisher, McKesson Corp., also made it into some charts with its MediNotes product. (To put things into perspective: Products were rated only if they have at least 75% of the functionality the researchers sought, which means that 18 products that were submitted for rating did not make the cut at all.)

• Top honors notwithstanding, the ideal choice for an EMR depends on practice size. Among systems sold to MD groups of more than 50, the top feature/functionality finishers are NextGen, Allscripts, Imedica, and A4. For practices of 16-49, top rated vendors are NextGen, Allscripts, JMJ, and A4. Practices of 5-14 MDs should take a hard look at JMJ, MedInformatix, Praxis, and eClinicalworks, he concluded.

• Epic Systems, widely viewed as the top EMR vendor for big organizations, isn't included in the survey. Nor is Cerner Corp., which has a relatively new EMR called PowerChart EMR.

• MediNotes, McKesson's Horizon Ambulatory care system is sold to almost any size practice, according to the report.

• Costs: EMRs are typically licensed on a per workstation basis. Factoring in hardware, training and implementation, and software, hardware and network support, systems are typically priced from $15,000-$30,000 per physician user.

• Of the EMRs marketed to large group practices (50-149 physicians), GE Medical's Logician is most widely installed, with 20,000 MD users. It ranks seventh in functionality, according to this report. Imedica ranks third on the same chart, but has only 800 users.

• Some vendors said they will substantially increase system functionality within the next year. They include MDAnywhere, WebMD Intergy and Monarch Medical International Cliniflow. Mark Anderson, AC Group, Inc, www.acgroup.org; 281-374-0394.

AHA Seeks Chink in HIPAA Privacy

In a Dec. 28 letter to the National Committee on Vital and Health Statistics (NCVHS), the American Hospital Assn. (AHA) recommends that hospitals be permitted to respond to payer requests for claims attachments by sending the plan an "entire document or record."

Currently, under the "minimum necessary" provision of the HIPAA Privacy Rule, only the information that is necessary to adjudicate a claim may be shared with payers. The rule may, however, undo a key advantage of XML, which is newly under consideration as a claims attachment standard that might allow relatively unsophisticated organizations to communicate electronically with payers without complex coding schemes.

"The rule must state clearly that when a provider uses the XML standard to forward to the health plan an entire document or record containing the information the health plan is looking for, the provider is compliant with the privacy rule's 'minimum necessary' requirement," AHA said.

NCVHS, a citizen advisory group to the Department of Health and Human Services, meets later this month to formulate its recommendation to the government for a claims attachment standard. HHS is expected to issue a draft claims attachment standard shortly.

The AHA also complains that payers make far too many attachment requests. Attachment requests should be a "rare event" rather than a "routine request," AHA said. Payers routinely come to providers for information they should be digging out of their own records, AHA said. They also install computer systems that lack programming logic that can associate related data elements within a claim.

AHA also seeks a requirement that providers be informed in advance of the questions that could be sought on claims attachment requests. That way, providers can collect answers to all possible questions up front, rather than chasing down answers to surprise questions after the patient is long gone. HL7 is defining standards for various kinds of claims attachments, and the questions that may be asked for each.

If the notion of using XML for a claims attachment standard catches you by surprise, it's probably because until recently, discussion has centered around requiring that claims attachment data to be sent in an HL7 message. The new plan is to allow XML transmission of claims attachment data. The approach is supported by HL7 and by ANSI's Accredited X12 Standards Committee.

Either way, the message would be embedded in X12 275 message format, but allowing XML would be technically easier, especially for smaller organizations. XML would give organizations the option of transmitting unstructured, human- readable data -- hence AHA's interest in allowing organizations to send entire records or entire documents. We haven't yet seen much response to AHA's proposal.

Psycho Killer...continued from page 1:

for state and national databases to keep background information on healthcare workers. He had been fired from six positions and quit three others, and had been criminally investigated in Pennsylvania in 2002 for similar behavior. However, hospitals that hired him said background checks on him turned up nothing.

The bad news for IT departments: he seems to have easily circumvented the security system for Somerset's Pyxis pharmacy cabinets.

Somerset's new $10 million Cerner HNA Millennium package also was apparently wide open to Mr. Cullen, who used it to obtain records on patients who were no longer his.

The good news: it was Somerset, rather than one of the other nine facilities, which was actually able to finger him. St. Luke's Hospital in Bethlehem, Pa., had reported him to the State Nursing Board in 2002 after twice finding full boxes of heart medication in a used-syringe bin. A cardiologist hired by St. Luke's combed records of 69 patients who died while Mr. Cullen was an employee, but uncovered no actionable evidence. The case was also investigated by a forensic pathologist retained by the Lehigh County District Attorney's Office, but was closed for lack of evidence in early 2003.

Somerset went live on Millennium CDR and ancillaries in June, 2002, several months before his arrival. Its application security system uses a single sign-on. Somerset implemented 14 Cerner applications in 11 months, according to a presentation at the 2003 HIMSS meeting.

The electronic footprints Mr. Cullen left in the Cerner and Pyxis systems were instrumental in the law enforcement investigation. County Prosecutor Wayne Forrest--who told us he doesn't even use his own e-mail address--focused heavily on information systems.

The suspect alleged gained access to the critical care unit's Pyxis station on the evening shift last June 15, and ordered Digoxin for a patient who was not prescribed the medication. "He obtained the Digoxin and then canceled the order on the computer system in an attempt to conceal his theft of the drug," the prosecutor's office alleged.

That same night, Cullen got access to his victim's medical records in Somerset's Cerner system, even though he had "no legitimate reason" to review them. Three days later, an inventory of the CCU Pyxis unit came up short by two bottles of Digoxin. That victim, Jin Kyung, 40, survived the overdose, then died later of cancer.

Two weeks later, Cullen is alleged to have followed exactly the same pattern, but this time, 68-year-old Catholic priest Florian Gall died after a Digoxin overdose. A July 1 inventory of the CCU Pyxis station came up four bottles of Digoxin short.

During his year at Somerset, Mr. Cullen accessed the "medication dispensing system for Digoxin at an abnormally high rate," the arrest warrant said.

As we went to press, the Somerset Count prosecutor's office was examining records on nine patients from Somerset Medical Center. At least two patients overdosed on Digoxin; at least four appeared to have overdosed on insulin. Prosecutors in other counties were checking into records of at least five other patients.

Did computer records alert Somerset to the fact it had a problem in the first place? Prosecutor Forrest said he doubts it. He said a hospital investigator uncovered records of patients with Digoxin levels "higher than any human being should ever have," and then began digging deeper.

Mr. Forrest's office also noted that following the overdoses, Somerset tightened its medication access procedures, whereupon "Mr. Cullen's accesses ceased." That seems to suggest that Somerset could have used tighter security procedures to begin with. Mr. Forrest encouraged us to ask the medical center, but officials there are not yet ready to talk.

Before Somerset, Mr. Cullen worked at:

• St. Barnabas Medical Center, Livingston, N.J., June 1987 to January 1992;

• Warren Hospital, Phillipsburg, N.J., February 1992 to December 1993;

• Hunterdon Medical Center, Raritan Township, N.J., April 1994 to October 1996;

• Morristown, N.J., Memorial Hospital, November 1996 to August 1997;

• Liberty Nursing Home, Allentown, Pa., February 1998 to October 1998;

• Easton Hospital, Easton, Pa., November 1998 to March 1999;

• LeHigh Valley Hospital, Bethlehem, Pa., December 1998 to April 2000;

• St. Luke's Hospital, Bethlehem, Pa., June 2000 to June 2002;

• Sacred Heart Hospital, Allentown, Pa., for 18 days, July, 2002.

He told prosecutors he was "alleviating suffering." He is being held at a New Jersey mental hospital.

Superior Gets 'Best Bang For Buck' Award From Frost & Sullivan

Superior Consultant Co. is living up to the "superior" part of its name, says the international business consulting firm Frost & Sullivan, which has singled it out for its best "Bang for the Buck" award. This is only the second time Frost & Sullivan has given the award, and the first time it has gone to a healthcare technology firm, said analyst Vivek Subramany.

As far as we can tell, this is not one of those "nominate yourself and hope nobody else bothers to apply" deals, but a genuine honor. Mr. Subramany said he contacted 14 competing firms and then selected Superior, which won on the basis of the flexibility and scalability of its offerings. The firm also scored points for offering packages that appeal to smaller hospitals, where Frost & Sullivan sees an increased demand for outsourcing services. Superior stacked up as a "premier provider of IT services and solutions" within healthcare, he said.

The research also contributed to a new Frost & Sullivan report, "US IT Outsource Markets for Healthcare." The report finds an overall trend toward increased healthcare outsourcing. The demand is being driven by federal regulation and hospitals' lack of in-house expertise. Turnover rates for hospital IT staffs are up around 17%, the report said.

The other firms Frost & Sullivan contacted for the report were Cap Gemini Ernst & Young (CGEY), Cognizant Technology Solutions, Computer Sciences Corp. (CSC), Daou Systems Inc., Eclipsys Corp., Electronic Data Systems Corp. (EDS), First Consulting Group (FCG); McKesson Information Solutions, Perot Systems Corp. (PHNS), Premier Sourcing Partners; Science Applications International Corp. (SAIC), Siemens Medical Solutions, and TriZetto Group Inc.

The report may be valuable to vendors, but we are guessing that from a hospital perspective, it will have some limitations. It lists market share leaders, but does not otherwise rank vendors. Also, Mr. Subramany said he did not interview any outsourcing clients. What about the cost-benefit information? He described his trove of vendor pricing information as "holistic." It's available on the Web, at www.frost.com/prod/servlet/ report-homepage.pag?repid=A652-01-00-00-00). The price is $3,950.

KLAS Enterprises is also preparing an outsourcing report, which will include client feedback. Clients either love their outsourcing vendors or they hate them, said KLAS VP Karen Ondo in a late October 2002 presentation. "We have received no survey from somebody in the middle." She emphasized that KLAS's research on the topic was just beginning.

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