LOGISTICS

Managing logistics costs pays off in lowering overall supply expense

By Paula DeJohn

When materials managers try to shave costs off of the supply chain, pricing receives the most attention.

However, those who also tackle the distribution system and embark on the difficult task of logistics planning could cut an additional 15% from the costs of bringing supplies from manufacturers to end users, industry studies indicate.

No one says the task is easy, least of all Larry Dooley, logistics guru at Novation in Irving, TX. Novation is the group purchasing organization (GPO) that VHA, also in Irving, shares with partner University HealthSystem Consortium (UHC) in Oak Brook, IL. As vice president of contract and program services for Novation, Dooley has tried to help VHA and UHC hospitals review and streamline their logistics.

The cost of caring

Dooley wants to take additional costs out of the healthcare supply chain, which typically consumes

(See Logistics, continued on p. 2)

PRICE SURVEY

Caps hold line on knee prices

The prices of knee implants are on the rise.

In HMM’s first price survey of knee implants, materials managers agreed that the price outlook for knees will feature increases.

Knee prices rose during 2005, according to about 60% of respondents, whereas the rest reported that their prices stayed level.

Reasons for the dim forecast include physician preference, a stable marketplace, and advances in technology.

Although national group contracts are available, a majority (60%) of respondents say they have negotiated their own local deals, taking into account the willingness of surgeons and vendor representatives to compromise on utilization and price.

That is not easy. Vendors often have the upper hand in the knee market, materials managers have told HMM in the past. The reps have the loyalty of doctors, who may have even helped develop the products they use.

However, materials managers have found creative ways to make the case for lower prices, such as

(See Price survey, continued on p. 3)
about 30% of hospital expenses nationwide. Of that 30%, logistics represent 38%, or about 11% of the nation’s hospital budget.

In other industries (e.g., retail), the logistics component of the cost of goods is much lower—about 5%, Dooley estimates. That’s because other industries can drop a supplier or distributor that demands excessive prices.

“In healthcare, the aim is patient care,” he says. “Suppliers have certain products we absolutely need.”

In fact, a hospital must deal with about 440 distinct manufacturers, each with a different payment process and account number, he says.

“The healthcare supply chain gets a bad rap for being inefficient, but actually, it does a good job at what it has to do,” Dooley says.

However, with many supply prices already bargained down as far as possible, hospitals have little choice but to tackle logistics costs in their efforts to trim expenses.

Don’t blame the distributors

The current distribution system is ailing, according to Dooley. Fuel costs have risen 100% in the past year and show no signs of dropping to 1990s levels.

Meanwhile, market forces and pressures from GPOs, all of which have negotiated preferred distributor contracts, have squeezed distributor margins.

Unlike third-party logistics providers such as United Parcel Service in Atlanta, medical-surgical

### Benchmarking distributor fees

The following products represent the bulk of hospital purchases, according to research by Novation Vice President Larry Dooley.

The table below shows what percentage of purchases each product category represents and the typical cost of distribution as a percentage of total spending on that product.

<table>
<thead>
<tr>
<th>Product</th>
<th>Share of total spending</th>
<th>Fee as % of price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staples and endosurgery</td>
<td>10.0%</td>
<td>1%</td>
</tr>
<tr>
<td>Custom packs and trays</td>
<td>9.4%</td>
<td>1%</td>
</tr>
<tr>
<td>Parenteral supplies</td>
<td>9.3%</td>
<td>3%</td>
</tr>
<tr>
<td>Textiles</td>
<td>6.2%</td>
<td>4%</td>
</tr>
<tr>
<td>Sutures</td>
<td>5.7%</td>
<td>3%</td>
</tr>
<tr>
<td>Respiratory supplies</td>
<td>4.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Needles and syringes</td>
<td>4.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Gloves</td>
<td>4.1%</td>
<td>5%</td>
</tr>
<tr>
<td>Bandages and dressings</td>
<td>3.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Electromedical supplies</td>
<td>2.8%</td>
<td>2%</td>
</tr>
<tr>
<td>Surgical instruments</td>
<td>2.6%</td>
<td>4%</td>
</tr>
<tr>
<td>Sterilization supplies</td>
<td>2.6%</td>
<td>3%</td>
</tr>
<tr>
<td>Standard packs and trays</td>
<td>2.4%</td>
<td>3%</td>
</tr>
<tr>
<td>Solutions</td>
<td>2.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Urological supplies</td>
<td>2.1%</td>
<td>4%</td>
</tr>
<tr>
<td>Wound care</td>
<td>1.6%</td>
<td>4%</td>
</tr>
<tr>
<td>Patient restraints</td>
<td>1.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Enteral feeding</td>
<td>1.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Hazardous waste control</td>
<td>1.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Incontinence supplies</td>
<td>1.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Disinfectants and scrubs</td>
<td>1.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Catheters</td>
<td>1.2%</td>
<td>2%</td>
</tr>
<tr>
<td>Soaps and shampoos</td>
<td>1.0%</td>
<td>5%</td>
</tr>
</tbody>
</table>
distributors purchase products from manufacturers and resell them to hospitals at cost plus a standard fee that averages 5%.

Prices of commodity products that distributors carry, (e.g., gloves, gowns, and wound dressings) have decreased, which means that the 5% markup has also decreased in real value.

However, hospitals either cannot or will not pay a higher percentage.

Therefore, distributors try to push their private label products, which bring them a larger share of the revenue. That leads brand manufacturers to step up marketing efforts to hospitals, even offering to bypass the distributor and deliver directly.

Simply put, hospitals must then decide whether to buy direct and bear the added costs of inventory or stay with the distributor and pay the fee.

“The current distribution model is getting ready to implode,” Dooley warns.

Due to various transactions over the years, the three major medical-surgical distributors are Cardinal Health in Dublin, OH; Owens & Minor in Richmond, VA; and McKesson Corporation in San Francisco. Together, they account for about 75% of the $80 billion U.S. medical-surgical distribution industry.

Moving up quickly is Medline Industries in Mundelein, IL.

All three distributors also have other healthcare businesses (e.g., pharmaceuticals, information technology, textile products, and long-term or home health-care products).

First, have a logistics plan

In a report to Novation members, Dooley recommends starting with a logistics plan before making any short-term decisions (e.g., changing distributors or building a consolidated warehouse).

He recommends taking the following four steps:

- **Analyze** the existing warehouse and central storage space, noting current problems or inefficiencies and projecting future needs
- **Survey** receiving dock space and consider how needs may change in the future
- **Assess** materials team staff and resources at each facility in the organization, and determine how needs would change in a different logistics system
- Finally, **map** the geographic arrangement of each facility in the organization, whether it is a single multifloor hospital or a large integrated delivery network that covers a wide area

Once materials management has a grasp of current conditions and future needs, several options are available. Most commodity (i.e., high-volume, low-price) products should arrive by distributor, Dooley advises. Physician preference items such as cardiology and orthopedic devices require special handling because vendors often arrange to deliver them directly to physicians. Materials managers will need to negotiate with clinicians to streamline deliveries.

“The key is to buy as much as you can through a distributor,” Dooley notes in his report to members.

---

**PRICE SURVEY**

(continued from p. 1)

comparing the procedure costs of their physicians and setting hospitalwide price standards for all knees, regardless of brand.

**New technology raises prices**

The May survey includes responses from hospitals, groups, and integrated delivery networks (IDN) and represents about 600 hospitals that total 120,000 acute-care beds. ECRI, a not-for-profit health services research agency in Plymouth Meeting, PA, provided additional prices from its ongoing surveys of 400 hospitals. Respondents to the HMM survey reported an average spending of $2,756 per bed on knee implants and components.

In the 12 months ending in April 2006, respondents reported price hikes averaging 9.3% and no decreases. For the coming 12 months, they forecast price increases averaging 17%. Causes will include new technology, new procedures, and physician-vendor relationships that do not depend on price.

An example of new technology is the development by British scientists of a thin ceramic type of coating that reduces friction in knee implants and

(See Price survey, continued on p. 4)
protects patients who are allergic to the metals used in the devices.

To coat the component, a technician mounts it in a vacuum chamber on an electrode connected to a high-energy radio wave transmitter. The technician then pumps a hydrocarbon gas (e.g., methane) into the chamber, and the energy from the radio waves separates the electrons from the carbon atoms in the hydrocarbons to produce positive carbon ions.

The negatively charged component attracts the ions to produce the diamond-like coating (DLC), according to the November 1, 2005, Advanced Ceramics Report.

In total knee replacement surgery, the surgeon replaces the ends of the long bones of the leg metal ends and places an insert between them.

The surgeon may fix the insert into place on the end of one bone or may not fix it completely, making the insert more mobile.

Another advancement described on the Web site www.jointreplacement.com is the rotating platform knee made by DePuy Orthopaedics, a division of Johnson & Johnson in New Brunswick, NJ. It allows the knee to rotate and articulate to replicate the knee’s full range of motion.

Keeping prices in line

Although group contracts often specify prices for each component and related products, materials managers have successfully instituted pricing that is not dependent on the vendor or choice of component. Instead, they have set prices per total knee implant or per procedure.

Such methods allow physicians to choose the device they prefer, and vendors must meet the price. The three main vendors in the United States are DePuy, Zimmer Holdings in Warsaw, IN, and Stryker Corporation in Kalamazoo, MI.

In this survey, respondents provided many more prices for DePuy products than for the other suppliers. However, that does not mean that Stryker and Zimmer are not major players. Most contracts are multisource with volume discounts.

However, many respondents said they prefer to set a capitated price for knees, in which one price applies regardless of vendor.

Following are average prices for total knees:
- Cemented: $3,583
- Hybrid: $3,839
- Porous: $4,036

In the capitated scenario, vendors compete for business not on price, but on service such as training clinicians.

A delicate balance

A knee implant is actually four separate devices or components.

A tibial component replaces the top of the shinbone (i.e., tibia). A tibial insert fits into the tibial component and lies between the point at which the tibia and femur (i.e., thigh bone) meet. This insert is disk-shaped and usually made of a polyethylene. The femoral component replaces the two femoral condyles—the bony ridges at the end of the femur—and the groove in the femur where it meets the patella.

The patellar component is a dome-shaped piece of polyethylene shaped like a natural kneecap.

In a fixed-knee prosthesis, a flat metal piece that securely holds the polyethylene insert tops the tibial component. When the knee moves, the femoral component glides across the polyethylene.

In a rotating platform knee prosthesis, the polyethylene insert can rotate, which gives the knee implant a more natural contact between the femoral component and the polyethylene.

Although the majority of knees implanted have traditionally been fixed-bearing, the rotating platform total knee replacement is growing more popular.

Surgeons perform most knee replacement surgery on patients with damage to cartilage from rheumatoid arthritis, osteoarthritis, or trauma.
Knees

Average knee prices are listed below, reduced to the price per unit unless otherwise noted. Prices reported by ECRI are listed in a separate column at the right.

<table>
<thead>
<tr>
<th>Product no.</th>
<th>Description</th>
<th>HMM 2006 price</th>
<th>ECRI 2006 price</th>
</tr>
</thead>
<tbody>
<tr>
<td>DePuy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117315000</td>
<td>Bone screw, titanium, low profile 15 mm.</td>
<td>112.06</td>
<td>—</td>
</tr>
<tr>
<td>117330000</td>
<td>Bone screw, titanium, low profile 30 mm.</td>
<td>112.06</td>
<td>—</td>
</tr>
<tr>
<td>117820025</td>
<td>Meniscal bearing, standard 10.0 mm.</td>
<td>821.74</td>
<td>—</td>
</tr>
<tr>
<td>117822025</td>
<td>Meniscal bearing, standard 15.0 mm.</td>
<td>821.74</td>
<td>—</td>
</tr>
<tr>
<td>117828025</td>
<td>Meniscal bearing, large 10 mm.</td>
<td>821.74</td>
<td>—</td>
</tr>
<tr>
<td>117846025</td>
<td>Tibial insert, standard 10.0 mm. rotating platform bearings</td>
<td>896.44</td>
<td>—</td>
</tr>
<tr>
<td>117858025</td>
<td>Tibial insert, large 15 mm. rotating platform bearings</td>
<td>896.44</td>
<td>—</td>
</tr>
<tr>
<td>117880101</td>
<td>Patella, polyethylene standard revision</td>
<td>466.90</td>
<td>—</td>
</tr>
<tr>
<td>117880103</td>
<td>Patella, polyethylene large revision</td>
<td>469.90</td>
<td>435.62</td>
</tr>
<tr>
<td>117880111</td>
<td>Knee, polyethylene, large, rotating 3 peg</td>
<td>466.90</td>
<td>—</td>
</tr>
<tr>
<td>117880113</td>
<td>Patellar insert medium dome, sterile</td>
<td>456.25</td>
<td>—</td>
</tr>
<tr>
<td>117912000</td>
<td>Tibial tray standard 65 mm. bicruciate retaining</td>
<td>3,156.22</td>
<td>—</td>
</tr>
<tr>
<td>117915000</td>
<td>Tibial tray large 80 mm. bicruciate retaining</td>
<td>3,156.22</td>
<td>—</td>
</tr>
<tr>
<td>117919000</td>
<td>Tibial tray 80 mm. cruciate retaining</td>
<td>2,110.37</td>
<td>—</td>
</tr>
<tr>
<td>117953501</td>
<td>Tibial tray 90 mm. porous</td>
<td>2,334.48</td>
<td>—</td>
</tr>
<tr>
<td>117966000</td>
<td>Patella, small, rotating</td>
<td>1,195.25</td>
<td>—</td>
</tr>
<tr>
<td>118001050</td>
<td>Trochlear component small</td>
<td>2,016.99</td>
<td>2,700</td>
</tr>
<tr>
<td>118014000</td>
<td>Patella, standard textured</td>
<td>877.76</td>
<td>—</td>
</tr>
<tr>
<td>118015025</td>
<td>Patella standard cruciform cement</td>
<td>989.82</td>
<td>—</td>
</tr>
<tr>
<td>118832000</td>
<td>Tibial pin, Synatomic VF</td>
<td>224.11</td>
<td>—</td>
</tr>
<tr>
<td>127180003</td>
<td>Femoral component, Keane medium</td>
<td>1,632.27</td>
<td>—</td>
</tr>
<tr>
<td>168846025</td>
<td>Tibial insert, 20 mm. constrained sterile</td>
<td>692.42</td>
<td>—</td>
</tr>
<tr>
<td>177972000</td>
<td>Patella, small 3 peg rotating porous</td>
<td>1,195.25</td>
<td>—</td>
</tr>
<tr>
<td>177981000</td>
<td>Patellar insert, small rotating cement sterile</td>
<td>877.76</td>
<td>—</td>
</tr>
<tr>
<td>186622000</td>
<td>Right posterior stabilizer size 2 textured</td>
<td>2,158.93</td>
<td>—</td>
</tr>
<tr>
<td>188409000</td>
<td>Knee insert ultra size 5</td>
<td>3,641.79</td>
<td>—</td>
</tr>
<tr>
<td>188439000</td>
<td>Extension stem 5 mm. fluted</td>
<td>672.33</td>
<td>—</td>
</tr>
<tr>
<td>188593500</td>
<td>Tibial tray ultra size 3 without pegs</td>
<td>1,699.50</td>
<td>—</td>
</tr>
<tr>
<td>188838000</td>
<td>Tibial stem size 5 cemented fixation</td>
<td>1,718.18</td>
<td>—</td>
</tr>
<tr>
<td>Stryker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6642-2-350</td>
<td>Patellar component Duracon metal back</td>
<td>—</td>
<td>826.14</td>
</tr>
<tr>
<td>6478-6-585</td>
<td>Adapter offset 2 mm.</td>
<td>—</td>
<td>838.71</td>
</tr>
<tr>
<td>6478-6-500</td>
<td>Adapter offset 8 mm. for total knee system</td>
<td>—</td>
<td>853.11</td>
</tr>
<tr>
<td>75-2-1110</td>
<td>Femoral block Scorpio TS 10 mm.</td>
<td>—</td>
<td>887.4</td>
</tr>
<tr>
<td>6430-0-050</td>
<td>Femoral component Avon x-small</td>
<td>—</td>
<td>3,433.33</td>
</tr>
<tr>
<td>7100-0007R</td>
<td>Basic femoral component</td>
<td>4,353.75</td>
<td>—</td>
</tr>
<tr>
<td>78-2-1115</td>
<td>Femoral component Scorpio biaxial</td>
<td>4,458.75</td>
<td>—</td>
</tr>
<tr>
<td>Zimmer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>642000200</td>
<td>Tibial base plate natural knee cemented</td>
<td>3,238.67</td>
<td>—</td>
</tr>
<tr>
<td>588602110</td>
<td>Tibial component posterior stabilized 10 mm.</td>
<td>4,641.00</td>
<td>—</td>
</tr>
<tr>
<td>621200220</td>
<td>Tibial base plate natural knee porous stemmed</td>
<td>—</td>
<td>1,323.83</td>
</tr>
</tbody>
</table>
HOSPITAL PURCHASING

HCA, Zimmer exchange conflicting statements about compliance discounts

An offhand remark during a conference call with investors led to a public dispute between HCA Healthcare in Nashville, TN, and Zimmer Holdings in Warsaw, IN, one of its orthopedic implant vendors. As a member of HealthTrust Purchasing Group in Brentwood, TN, HCA has access to a group contract with Zimmer. Terms of the deal, which took effect March 2004, include a substantial, undisclosed discount for a 95% compliance level.

Other vendors in the multisource deal are the DePuy division of Johnson & Johnson in New Brunswick, NJ, and Stryker Corporation in Kalamazoo, MI. They also offer volume discounts in return for 95% compliance, according to published reports.

Despite the fact that it owns its 170 hospitals, even HCA cannot deliver total compliance on these high physician preference products.

Zimmer said in a letter to HealthTrust president Jim Fitzgerald (who is also a vice president of HCA) that HCA tried to get around the compliance rule by asking for an exception for 23 of its hospitals and requesting the full discount with a compliance level of 90%.

Zimmer did not agree to the exceptions, according to the letter.

During the February 1 conference call, HCA president Richard M. Bracken said he was optimistic that HCA would be able to negotiate better discounts from Zimmer and said he expected the Office of Inspector General to approve a proposed gainsharing plan. “We have now met our target and are anticipating pricing discounts for the remainder of 2006,” he added.

In the letter to Fitzgerald, Norman D. Finch Jr., global marketing counsel for Zimmer, said Bovender knowingly misled investors and damaged Zimmer’s financial standing. He called for “an immediate public retraction of the compliance-related statements.”

On February 7, Bovender issued a statement expressing regret for the comment. In the statement, he added, “At the time of the conference call, HCA was in active negotiations with representatives of Zimmer to reduce its compliance commitment from 95% to 90%, and HCA believed it would be able to obtain that change. Having reviewed the letter from Zimmer, . . . we conclude [that] we were wrong in that belief.”

Med-surg supplier Tyco Healthcare to become independent company

Tyco Healthcare in Mansfield, MA, which during the past decade has snapped up a growing number of supplier companies, is about to be spun off by its parent company.

Tyco International announced in January that it would split into three publicly traded companies in early 2007, one of which will be a healthcare business.

Tyco Healthcare currently owns the following medical-surgical suppliers (listed with their primary products):

- AutoSuture: surgical staplers and laparoscopic instruments
- Mallenckrodt: contrast media
- Kendall: needles, syringes, and wound care products
- Nellcor: pulse oximeters
- Puritan Bennett: respiratory care products
- Syneture: a company formed by the merger of the suture businesses of U.S. Surgical and Sherwood Davis & Geck
- Valleylab: electrosurgery products

Maryland hospital to gain $10 million in annual savings from standardization

Civista Medical Center in La Plata, MD, 117 beds, in January joined Premier in Charlotte, NC, after dropping its membership in MedAssets in Alpharetta, GA. The hospital is part of Civista Health and estimates that it will purchase $10 million annually in supplies and services through Premier contracts.

“The market basket Premier did for us identified the potential to save nearly 15% on our supply expenses. That got our attention,” said Carolyn Core, vice president of corporate services at Civista, in a news release.

She said Civista is moving ahead rapidly to implement contracts to realize those savings as quickly as possible. The system will use Premier contracts and consulting services, with expectations that organizational behavior changes will help maintain supply chain savings.

Greg Tornatore, Premier’s regional vice president in the mid-Atlantic, said his team would work closely with Civista to accelerate the organization’s supply
VA hospitals are in forefront of switch to use of mobile devices for patient data

The Veterans Health Administration of the Department of Veterans Affairs (VA) in February awarded a contract for patient identification products to CareFusion in McLean, VA.

VA hospitals have used CareFusion software before and were among the first facilities to document error-reduction rates of 86% following implementation.

Under the latest deal, the 171 VA hospitals will participate in a project called Barcode Expansion to increase positive patient identification in the labeling of blood and laboratory specimens.

The VA is building on the success of the internally developed Bar Code Medication Administration (BCMA) software that it has used since 1999. Although the VA system features wireless laptop computers and attached bar code scanners, the CareFusion version includes mobile handheld devices.

The CareFusion applications that the VA has selected include products that:

- verify and label lab specimens
- verify blood products prior to transfusion
- document vital signs and patient care information
- produce a consolidated view of patient data
- support medication administration, allergy warnings, safety alerts, and complex IVs

The contract calls for the implementation, training, and ongoing support for the five CareFusion software applications.

Patriot Technologies in Gaithersburg, MD, will participate in the VA agreement with Care Fusion through a separate contract with that company.

In an unrelated deal, Beloit (WI) Memorial Hospital, 175 beds, also has used Care Fusion patient ID bar code software since September 2003. During the first four months after implementation, Beloit saw a decrease of 67% in the average monthly medication administration error rate.

Healthcare workers have used wireless technology for about 10 years, but not widely until after the advent of standards-based 802.11 “WiFi,” according to an article on CareFusion’s Web site. First used with freestanding laptop computers and desktop personal computers on carts, it has now become a more mature, secure, and accepted technology to transmit data to handheld computer devices in information technology networks in hospitals and physician practices.

GHX, Neoforma merger leaves hospitals with just one choice of e-commerce site

It’s official: There is only one major healthcare electronic commerce provider left standing.

On March 3, Global Healthcare Exchange (GHX) in Westminster, CO, completed its acquisition of Neoforma of San Jose, CA.

Immediately prior to the merger, both VHA in Irving, TX, and University HealthSystem Consortium (UHC) in Oak Brook, IL, which together owned the majority of Neoforma’s outstanding shares, exchanged a portion of their Neoforma shares for equity positions with GHX.

(See Hospital purchasing, continued on p. 8)
This brings the number of owners of GHX—initially founded by a group of suppliers—to 20.

In a news release, GHX said it would immediately begin migrating Neoforma customers to the GHX exchange. The merger expands the number of trading partners using GHX to 2,500 acute-care hospitals, 800 nonacute facilities, and 200 suppliers.

The two e-commerce platforms will combine their data management offerings. For example, Neoforma will merge its Data Management Solutions package with the GHX’s Content Center to track procurement and contracting.

To meet the needs of its expanded customer base, GHX has hired an additional 150 employees, including 80 former Neoforma employees.

GHX also will take over MarketplaceatNovation.com, the e-commerce site previously maintained by Neoforma. VHA and UHC members are able to access contract pricing via the site.

FDA plans to exercise tighter control of postmarket experience with devices

The Food and Drug Administration (FDA) plans to beef up its oversight of medical devices that it previously approved for use by tightening the requirements for hospitals and device manufacturers to report any defects of which they become aware.

Depending on the severity of a defect, the FDA will alert clinicians and the public and may issue product recalls and levy fines.

A January report from the FDA’s Center for Devices and Radiological Health (CDRH) in Rockville, MD, Ensuring the Safety of Marketed Medical Devices: CDRH’s Medical Device Post market Safety Program, spells out the plan.

In a summary of the report, the FDA notes that it receives “tens of thousands of adverse event reports each year,” but often they do not contain enough information to pinpoint a faulty device. For example, healthcare providers often do not specify in patients’ records the devices used in treatment.

When selecting beds, hospitals must consider patient entrapment possibility

Materials managers can expect to add patient entrapment danger to the qualities they must consider when selecting vendors of patient beds. In March, the Food and Drug Administration (FDA) published final guidance designed to reduce the occurrence of hospital bed entrapments. Entrapment can occur when part of a patient’s body becomes caught between parts of the bed (e.g., the space between the mattress and side rail). This can cause strangulation and death. This guidance was prepared using input from both government and private sector groups.

The guidance document is the result of a collaboration between the FDA and the Veterans Administration, Health Canada’s Medical Devices Bureau, representatives from national healthcare organizations and provider groups, patient advocacy groups, and medical bed and equipment manufacturers.

The FDA said in a news release that it has received 691 entrapment reports during a period of 21 years, from January 1, 1985, to January 1, 2006.

In these reports, 413 people died, 120 were injured, and 158 were near-miss events with no serious injury as a result of intervention.

These entrapment events have occurred in openings within the bed rails, between the bed rails and mattresses, under bed rails, between split rails, and between bed rails and head or foot boards.

Overlake Hospital begins pilot program to test Omnicell medication system

Overlake Hospital Medical Center in Medina, WA, 257 beds, is pilot-testing a bedside patient safety automation system from Omnicell in Palo Alto, CA. The system is called SafetyMed.

The pilot project is built around placing bar codes on all medications used in the medical center with Omnicell’s SafetyPak bar code packaging system and then using those bar codes to verify drugs that nurses take from the point of use (i.e., the cabinet that dispenses the drug) to the point of administration (i.e., the patient bedside).

Ted Neal, RPh, MBA, director of pharmacy for Overlake, said in a news release that his department selected Omnicell because it offers a unique capability of cabinet-to-bedside integration of patient medication information.

Representatives from pharmacy, nursing, and information systems evaluated major technologies in the marketplace before settling on SafetyMed RN, according to Neal.

The drug bar-coding process in the hospital’s pharmacy began in March and will take about three months
to fully implement. Once the drugs are bar-coded, mobile computers (e.g., handheld devices) will record the medication data.

The hospital will evaluate results in this fall.

**Hospitals gain by defining supply chain benchmarks in terms of clinical outcomes**

Benchmarking is a difficult but necessary part of controlling supply chain costs. Too often, hospitals focus on clinical benchmarks because of their importance to patient outcomes. However, one hospital found a way to apply clinical benchmarks to supply use and procurement, thus wedding outcomes to cost savings.

As described in a report by the Healthcare Financial Management Association (HFMA) in Westchester, IL, Washington Regional Medical Center in Fayetteville, AK, 294 beds, found $500,000 in annual savings from just two service lines: dorsal and lumbar fusions and back and neck procedures. A benchmarking team had determined that the cost of these procedures varied in three areas: supplies, laboratory, and operating room.

On the supply side, the committee

- reached clinical consensus for standardizing supplies
- standardized vendor policies
- reviewed cost variances to account for complications and mortality
- shared the data with orthopedic surgeons and neurosurgeons

The HFMA report is entitled *Look to Benchmarking for Ways to Cut Supply Costs*. **Communication difficulty leads hospital to buy devices for personal communication**

What good is a well-honed disaster response plan if participants can’t talk to each other when it goes into effect?

That question arose recently at Sherman Oaks Hospital in Van Nuys, CA, 153 beds, and led to a contract award for PortaCom Pro intercom sets from Anchor Audio in Torrance, CA.

Alan Goldstein, member of the disaster preparedness committee at Sherman Oaks, said in a news release, “We do drills with biohazard suits that are used for decontamination. These are fully contained, including helmets with air pumped inside. Unless the team is right on top of each other screaming at the top of their lungs, they can’t communicate with each other.”

“I searched trade shows for a wireless intercom solution and found the PortaCom Pro from Anchor Audio. These are now a standard part of our decontamination suits. Before the helmet is put on, the headset and microphone are attached to a belt or pocket and turned on,” he added.

The list price of a four-set PortaCom Pro system is $3,215.

Sherman Oaks Hospital is one of 14 hospitals participating in the Disaster Resource Center at St. Joseph’s Medical Center in Burbank, CA, 455 beds.

In a related note, the U.S. Agency for Healthcare Research and Quality recently published the evidence report *Training of Hospital Staff to Respond To A Mass Casualty Incident*. It summarizes 21 studies that range from descriptions of local preparedness drills (e.g., transportation incidents and fires) to a large regional drill involving multiple agencies.

The researchers concluded that internal and external communications are the key to effective disaster response. The Joint Commission on Accreditation of Healthcare Organizations has issued new environment-of-care standards that require hospitals to cooperate in developing disaster response plans to cover the geographic areas they share.

The standards also require hospitals to test their emergency management plans twice per year, including at least one communitywide practice drill to assess communications, coordination, and the effectiveness of command structures.
GROUP PURCHASING

Suppliers, groups continue dueling before Senate subcommittee as hospital weighs in

Groups and suppliers continued to offer conflicting testimony during the fourth Senate antitrust subcommittee hearing on March 15, but this time, a hospital purchasing expert offered a buyer’s point of view—and came down firmly on the side of group purchasing organizations (GPO).

The lawmakers met to evaluate the latest efforts by GPOs to regulate themselves through a system of online compliance reports by groups sponsored by the Healthcare Group Purchasing Industry Initiative (HGPII). The result was equivocal, based on testimony posted on the subcommittee’s Web site.

Senator Herb Kohl (D-WI), the subcommittee’s ranking minority member, questioned whether HGPII could really enforce its rules, which require GPOs to post regular reports on the HGPII Web site concerning their compliance with an industry code of ethics that strictly regulates GPO-supplier relationships.

Senator Charles Schumer (D-NY) said he was concerned that hospitals would pay the price for further regulating GPOs by reducing the groups’ ability to charge administrative fees to suppliers.

Mina Ubbing, president and CEO of Fairfield Medical Center (FMC) in Lancaster, OH, 222 beds, who has taught healthcare purchasing management at the college level, spoke in favor of group purchasing. The hospital has been a member of Amerinet in St. Louis for 22 years. Fairfield saves $1.1 million annually on supplies by purchasing through Amerinet contracts, which cover 63% of the hospital’s supply purchases, Ubbing said.

For example, the hospital buys sutures off contract because of physician preference, she said.

“If [we] were forced to perform [our] own contracting in place of those GPO services we use, we would need to add at least five new professional staff positions to our purchasing department, at an annual cost of at least $400,000,” she said.

She said she is not concerned about the administrative fees that Amerinet receives from vendors based on contract compliance. She noted that vendors rely on GPOs to provide marketing and distribution support in exchange for the fees they pay GPOs.

Mark Leahey, executive director of the Medical Device Manufacturers Association, disagreed. During his testimony before the subcommittee, Leahey referred to audits by the Office of Inspector General that found that six GPOs collected $2.3 billion in fees, whereas their operating expenses were a whopping $725 million.

“That means the GPOs collected an excess of $1.6 billion in fees, and they don’t manufacture products, and they don’t distribute products,” he told the panel.

Leahey noted that groups base administrative fees—generally limited to 3%—on the purchasing volume of group members. Thus, the incentive is for groups to contract for higher, not lower prices, he said.

The Health Industry Group Purchasing Association (HIGPA) issued a press release following the hearing saying it was pleased with the outcome.

HIGPA chair Al LoBiondo requested that the senators take no action to counter the HGPII initiative.

Allhealth hospitals will convert to deals from Novation: ‘Can’t ride two horses’

Amerinet Central in Warrendale, PA, in March acquired the regional group purchasing organization (GPO) AllHealth of Harrisburg, PA.

AllHealth members will be able to use national contracts from Amerinet in St. Louis, the parent organization of Amerinet Central. The deal will add AllHealth’s $724 million in annual purchasing volume to Amerinet’s national volume of $6.35 billion.

Amerinet Central also acquired AllHealth’s insurance and benefits business that contract with about 85 hospitals covering 100,000 employees.

AllHealth negotiates contracts for about 1,500 acute-care and other facilities in the mid-Atlantic region, with regional managers in Pennsylvania, Delaware, Maryland, central and western New York, Virginia, West Virginia, and Washington, DC. In 2005, members saved a total of $60 million on contracted supplies and services.

However, the members also had access to contracts from Novation in Irving, TX, via AllHealth’s membership with Novation affiliate Healthcare Purchasing Partners International, also in Irving. The change to Amerinet has some members wondering what will happen to their purchasing choices.

“I was surprised,” says Richard Benjamin, materials management executive at Diakon Lutheran Social Ministries in Topton, PA, 1,000 beds. “It was like an earthquake,” he says of the March 10 announcement to members. “We’re a member of both groups, but their contracts are a little different,” he notes. “We can’t ride
two horses.” Benjamin says he is confident the transition will run smoothly.

According to D. Patrick Mazzolla, president and CEO of AllHealth, the decision came after a yearlong review of the group’s strategy and interviews with potential group purchasing partners. “We are confident that Amerinet is our best partner for the future from a business model and corporate culture standpoint,” Mazzolla said in a news release.

Victor Samolovitch, president of Amerinet Central, said the company will keep open AllHealth’s offices in Harrisburg, Philadelphia, Pittsburgh, and Washington, DC, and retain AllHealth’s group purchasing, insurance, and benefits staff.

Amerinet Central is one of three regional groups that are shareholders in Amerinet. The others are Intermountain Health Care in Salt Lake City and Vector in Providence, RI.

Before the AllHealth acquisition, Amerinet members totaled 1,900 hospitals and 33,000 non-acute-care facilities, which together saved $320 million on their spending of $6.5 billion on supplies in 2005.

VHA urges hospitals to evaluate supply needs in case of avian flu outbreak

If an outbreak of avian flu struck in the United States, chances are that local hospitals would be short of critical supplies such as gloves, masks, IV supplies, and ventilators.

What’s more, the chances of obtaining rush orders would be hampered because many of these products are produced in China and other Asian countries, which already are facing their own flu crises.

That’s the conclusion of a recent study by VHA in Irving, TX.

VHA surveyed 267 hospital leaders (e.g., chief nursing officers, infection control personnel, and emergency department directors) from member hospitals nationwide to find out whether they are prepared for a major avian flu epidemic.

Although 62% said their hospital has a disaster plan in place, 60% said they do not believe that either supply or staffing levels would be sufficient for an avian flu pandemic.

One reason cited is that most hospitals have converted to just-in-time (JIT) inventory planning, so they do not have large storehouses full of supplies.

JIT has proven efficient and cost-effective under normal conditions, but it leaves hospitals vulnerable during a crisis, the VHA researchers noted.

In case of an avian flu outbreak, hospitals will most likely find themselves short of antiviral medications, masks, gloves, gowns, and IV supplies.

VHA found that hospitals typically have a seven-day supply of these items. That was the case with 59% of respondents, whereas only 6% said they have a 30-day supply on hand.

VHA then polled 20 of its largest members and found that on average, the larger health systems have about a four-week supply of critical medical products.

The U.S. Department of Health and Human Services recommends that hospitals consider stockpiling enough masks, gloves, and related disposable supplies to last for the duration of a pandemic, or approximately six to eight weeks. It also recommends that hospitals:

- anticipate the need for supplies and determine trigger points for ordering extra resources
- estimate the need for respiratory care equipment (e.g., mechanical ventilators) and develop a strategy for acquiring additional equipment, if necessary
- anticipate the need for antibiotics and determine how supplies can be maintained during a pandemic

VHA vice president Larry Dooley, who is responsible for logistics strategy, warned that U.S. hospitals will feel the effect of an avian flu outbreak overseas before the disease actually occurs in the United States.

“All of the supplies highlighted as necessary are made in places like China, Singapore, and Malaysia. These are potential hotspots for avian flu and are more likely to see a pandemic first,” Dooley said in a news release. “An outbreak there would impact manufacturing and transportation capabilities in those countries, which ultimately would impact U.S. hospitals’ ability to take care of patients.”

Dooley estimates that most large medical distributors have a 20- to 30-day stockpile of medical-surgical supplies.

However, he does not believe that those stockpiles and current hospital inventories would be enough in the event of a flu outbreak.

(See Group purchasing, continued on p. 12)
Rather than rushing to build up stockpiles, which would create stress in the supply chain, Dooley recommends that hospitals take the following steps:

- Determine whether they need to slowly begin making changes to prepare for avian flu or other pandemic
- Communicate their needs to their supply distribution partners
- Network with other hospitals in their community or region
- Develop a contingency plan for how they might share or move supplies within a region as needs change

Dooley notes that if the flu progresses from region to region, there may be enough flexibility in the supply chain to permit sharing of supplies.

Meanwhile, The New York Times reported on March 12 that ventilators that hospitals would need in serious flu cases are in limited supply nationwide.

At an average price of $30,000, hospitals cannot afford to purchase ventilators that they may never need. The Times reported that of the 105,000 ventilators available nationwide, about 100,000 are already in use.

Clinicians would need up to 742,500 in the worst-case pandemic scenario described in the national preparedness plan issued by the Bush administration in November 2005.

### Amerinet taps Encompass Group to provide furniture, interior design for hospitals

Amerinet in St. Louis has a new contract for furnishings for hospitals and other healthcare facilities. The vendor is Encompass Group, LLC, in Mcallen, TX.

The deal took effect February 1 and runs for one year. It involves furniture, floor coverings, wall coverings, cubicle curtains, window treatments, and design services. This contract was the result of a competitive bidding process.

### Shared Services Healthcare contracts with Denver firm to provide security

Shared Services Healthcare (SSH) in Atlanta has contracted with Hospital Shared Services (HSS) in Denver to provide security and protective services.

HSS is a regional GPO that specializes in security and has healthcare security experts on staff. The deal took effect in January.

HSS will provide its healthcare-specific security program to SSH member facilities at rates based on local markets for wages, employee benefits, and program support.

### Brand-name toner cartridges available under new Amerinet pact with Clarity

Amerinet in St. Louis has signed a new agreement with Clarity Imaging Technologies in Springfield, MA, for laser toner cartridges. The deal took effect February 6 and is part of the Amerinet Choice program. It covers Hewlett-Packard, Lexmark, IBM, and Dell printers and Canon fax equipment.

Clarity Imaging Technologies manufactures double-yield toner cartridges that allow for major cost reductions in printer output.

### Novation awards contract to Masimo for new Rainbow pulse oximeter line

Novation in Irving, TX, awarded a contract to Masimo of Irvine, CA, for pulse oximeters.

The deal took effect in February and runs for three years. It covers the company’s SET and Rainbow SET product lines, including stand-alone monitors, handheld monitors, and sensors.

Rainbow SET is a new technology that uses eight wavelengths of light to allow clinicians to capture and monitor a wider array of patient physiological data than in previous versions.

The handheld Rad-57 oximeter is the first of the Rainbow line that the Food and Drug Administration has cleared for marketing.

The Masimo deal is part of a dual-source contract for oximetry.

### Amerinet selects two vendors to provide disposable supplies for examination rooms

Amerinet in St. Louis has two new contracts for examination room paper products. One vendor is Med-Chain Logistics in La Vergne, TN.

The deal, which took effect February 6, covers disposable exam table paper, stretcher sheets, pillowcases, gowns, caps, and professional towels. This contract was the result of a competitive bidding process.

The agreement is part of the Amerinet Choice
program. The parties did not disclose their spending and savings estimates.

The other deal is with TIDI Products, LLC (formerly Banta Healthcare) in Neenah, WI, for exam room paper products, also effective February 6.

This contract offers undisclosed savings on disposable exam table paper, stretcher sheets, pillowcases, gowns, capes, and professional towels. This contract was the result of a competitive bidding process.

Premier’s Clinical Advisor software gains new customer in Kentucky system

Premier in Charlotte, NC, sold its Clinical Advisor software package to Ephraim McDowell Health in Danville, KY.

In December 2005, the integrated delivery network signed a five-year agreement to implement Premier’s Clinical Advisor in two of its hospitals: Ephraim McDowell Regional Medical Center in Danville, 177 beds, and Fort Logan Hospital in Stanford, KY, 73 beds. Clinical Advisor taps into the group’s Perspective database to identify opportunities for improvement in clinical quality, cost, and utilization.

Perspective maintains more than three billion patient charge records and 2.8 terabytes of data, allowing healthcare facilities to measure clinical outcomes, benchmark against best-practice hospitals, and track performance improvement results.

Ephraim McDowell operates two hospitals, an assisted-living facility, a wellness center, and six family medical centers.

Help is on the way for Amerinet members under new deal for inventory management

Members of Amerinet in St. Louis seeking inventory management assistance have a new contract with Management Health Solutions in Wayne, PA, that took effect February 1.

This open-ended contract offers Amerinet members savings on inventory management assistance for operating rooms, pharmacy, storerooms, central supply, catheterization laboratories, radiology, emergency room, dietary, maintenance, capital equipment, physical inventory services, inventory management programs, data cleansing, data management, and process improvement strategies.

The parties did not disclose the financial data of the contract.

Consorta tightens contract relationship with Kellogg to provide familiar food

Consorta in Schaumburg, IL, will offer member hospitals a chance to serve patients popular food during their stays.

Consorta contracted with the Kellogg Company of Elmhurst, IL, to provide brands such as Kellogg’s cereals, Keebler cookies and crackers, Pop-Tarts, Eggo waffles, Nutri-Grain Bars, and Zesta Saltines under a new agreement.

Although Consorta members previously had access to some of Kellogg’s products and product rebates through other agreements, the new deal provides more direct information about products and prices.

Sharon McCauley, contract manager for Consorta, said in a news release that the contract consolidates Kellogg’s Food Away From Home products and net prices in the Consorta product catalog for easy reference by members.

The contract also covers Kellogg’s merchandising and marketing tools.

For permission to reproduce part or all of this newsletter for external distribution or use in educational packets, please contact the Copyright Clearance Center at www.copyright.com or 978/750-8400.
The overall pharmaceutical index was 103.06 in the fourth quarter of 2005, showing an increase of 0.62% from the previous quarter and 3.06% from a year ago.

The “cephalosporins and related” category declined by 3.97% to 101.97 from its 2005 high of 106.19. It was the only pharmaceutical index to decline in the fourth quarter. This category was the most stable in terms of yearly change, rising by 1.97%.

**Psychotherapeutics rising again**

After a brief series of declines, the psychotherapeutics index rose again. It was up 1.85% for the quarter and 3.45% for the year.

HMM obtains its indices from IMS Health in Plymouth Meeting, PA. The base period for this report is the fourth quarter of 2004.

Drug indices average 3% increase during 2005

For permission to reproduce part or all of this newsletter for external distribution or use in educational packets, please contact the Copyright Clearance Center at www.copyright.com or 978/750-8400.
The finished goods component of the producer price index for February declined by 1.4% from the previous month and was up 3.7% for the 12-month period from February 2005 to February 2006.

In the medical-surgical categories surveyed, the average change for the month was -0.5%.

Surgical and medical instruments showed the greatest drop at 2.4% lower they were than in January. Only electromedical equipment rose during the month, by 0.2%.

Several CPI components declined
On the consumer side, the February 2006 unadjusted medical-care commodities component of the consumer price index was 283.1, up 0.4% from January, and 3.8% for the year.

Prescription drugs and medical supplies were up by 0.6% from January. Nonprescription drugs and medical supplies declined by 0.2% for the month, as did internal and respiratory over-the-counter medications. The nonprescription medical equipment index was down by 0.1%.

<table>
<thead>
<tr>
<th>Product</th>
<th>February 2006</th>
<th>January 2005</th>
<th>February 2005</th>
<th>Change in month</th>
<th>Change in year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished goods</td>
<td>157.8</td>
<td>160.0</td>
<td>152.1</td>
<td>-1.4%</td>
<td>+3.7%</td>
</tr>
<tr>
<td>Catheters</td>
<td>129.9</td>
<td>130.0</td>
<td>129.6</td>
<td>-0.1%</td>
<td>+0.2%</td>
</tr>
<tr>
<td>Clinical laboratory instruments</td>
<td>125.7</td>
<td>125.7</td>
<td>125.0</td>
<td>0.0%</td>
<td>+0.6%</td>
</tr>
<tr>
<td>Electromedical equipment</td>
<td>89.9</td>
<td>89.7</td>
<td>91.3</td>
<td>+0.2%</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Irradiation apparatus</td>
<td>111.4</td>
<td>111.8</td>
<td>111.1</td>
<td>-0.4%</td>
<td>+0.3%</td>
</tr>
<tr>
<td>Surgical and medical instruments</td>
<td>132.7</td>
<td>135.9</td>
<td>135.3</td>
<td>-2.4%</td>
<td>-1.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>February 2006</th>
<th>January 2005</th>
<th>February 2005</th>
<th>Change in month</th>
<th>Change in year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical care commodities</td>
<td>283.1</td>
<td>282.0</td>
<td>272.8</td>
<td>+0.4%</td>
<td>+3.8%</td>
</tr>
<tr>
<td>Prescription drugs and medical supplies</td>
<td>359.9</td>
<td>357.6</td>
<td>344.5</td>
<td>+0.6%</td>
<td>+4.5%</td>
</tr>
<tr>
<td>Nonprescription drugs and medical supplies</td>
<td>153.6</td>
<td>153.9</td>
<td>150.6</td>
<td>-0.2%</td>
<td>+2.0%</td>
</tr>
<tr>
<td>Internal and respiratory over-the-counter drugs</td>
<td>182.1</td>
<td>182.5</td>
<td>177.4</td>
<td>-0.2%</td>
<td>+2.6%</td>
</tr>
<tr>
<td>Nonprescription medical equipment and supplies</td>
<td>182.6</td>
<td>182.7</td>
<td>181.7</td>
<td>-0.1%</td>
<td>+0.5%</td>
</tr>
</tbody>
</table>

Recent price surveys

- **April 2006: Sutures.** Overall prices for sutures held steady in 2005, but the newest contracts feature increases.
- **March 2006: Needles and syringes.** The modest price increases that marked 2004 have ended, but the decreases predicted for 2005 did not materialize.
- **February 2006: Gloves.** Materials managers reported an average price decline of 18% for selected products.
- **January 2006: Paper.** As long as energy prices continue to rise, so will the price of paper, materials managers say.
- **December 2005: Foley catheters.** Even with several new contracts on the books, Foley catheter prices have remained stable during the past year and are expected to stay that way.
- **November 2005: IV solutions.** Prices of IV fluids and related supplies rose last year but not as much as predicted. They will continue increasing next year except where protected by contracts.
- **October 2005: Cardiac catheters.** Prices of cardiac catheters will decline next year, except where they are frozen under current contracts.
- **September 2005: Wound care.** Prices of wound care supplies are increasing this year, but don’t blame the advanced products making news lately.
People on the move

Diane Echazabal, RN, was promoted to the position of clinical materials resource coordinator at Yavapai Regional Medical Center in Prescott, AZ, 135 beds. She previously was the orthopedic lead in the surgery department at Yavapai.

Stuart Baker, MD, was promoted to executive vice president and COO at VHA in Irving, TX, with responsibilities for all business and field operations. Previously, Baker served as executive vice president of national operations.

Positions available

Good Samaritan Medical Center in Lafayette, CO, 144 beds, is seeking a materials management assistant and a distribution technician. To apply, visit www.exemplajobs.org.

BJC HealthCare in St. Louis is seeking a director of supply chain logistics. Contact Steve Winter, director of human resources, BJC HealthCare, 4353 Clayton Road, Mail Stop 90-68-131, St. Louis, MO 63110. Call 314/362-1570 or e-mail usw5514@bjc.org.

Lutheran Medical Center in Wheat Ridge, CO, is seeking an ancillary resource manager. To apply, visit www.exemplajobs.org.

MedAssets in Alpharetta, GA, is seeking a regional vice president of sales in Florida. For more information, e-mail your résumé to employment@medassets.com.

Banner Health in Phoenix is seeking an RN clinical supply manager. The position will be located at Banner Support Services in Chandler, AZ. Contact Evelyn Kras at 602/495-4755 or e-mail Evelyn.Kras@BannerHealth.com.

Trinity Health in Farmington Hills, MI, is seeking a director of procurement operations. To apply, visit www.trinity-health.org.

Scott and White Memorial Hospital in Temple, TX, 625 beds, is seeking a procurement professional to monitor contract implementation and utilization. To apply, e-mail your résumé to gbollie@swmail.sw.org or contact the human resources department, 2401 S. 31st St., Temple, TX 76508.

ECRI in Plymouth Meeting, PA, has several positions open. ECRI is seeking a medical equipment specialist to maintain technical specifications on medical equipment and a medical equipment associate to provide consulting services in healthcare technology. ECRI also is seeking a medical equipment senior associate. To apply, visit www.ECRI.org.