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NOVEMBER 2003

VOL. 22, NO. 11 • (pages 133-148)

Health care worker illness may be the clue to next SARS outbreak

EHPs should monitor employees with pneumonia

Health care workers with pneumonia may be the sentinels for a new outbreak of severe acute respiratory syndrome (SARS). Faced with the dilemma of identifying the first suspected cases of SARS amid a backdrop of widespread, seasonal respiratory illness, public health authorities are urging hospitals to monitor their employees' health.

Hospitals should report clusters of two or more health care workers involved in direct patient care who have pneumonia that was confirmed through chest X-rays to their local or state health department, the Centers for Disease Control and Prevention (CDC) says in draft recommendations.

Most likely, those health care workers won't have SARS. But with no reliable laboratory test that can be used as a diagnostic tool, SARS surveillance depends on astute observance of patterns, CDC medical epidemiologists said. Being a health care worker was one of the greatest risk factors in the past outbreak, which sickened more than 1,700 health care workers in the six hardest-hit countries. **(See chart, p. 136.)**

"It's going to be the combination of clinical and epidemiologic features that's going to be the key in identifying SARS," says **John Jernigan, MD, MPH**, medical epidemiologist in the CDC division of healthcare quality promotion and a member of the CDC's SARS Preparedness Task Force. *(Editor's note: One case of SARS was confirmed in September in a medical researcher in a laboratory in Singapore. The CDC and other international health agencies now are reviewing biosafety precautions.)*

If SARS recurs, U.S. hospitals may not be as fortunate as they were in the past outbreak. Last winter, only eight U.S. patients had laboratory-confirmed cases of SARS, including one health care worker. Yet an unpublished CDC survey of 110 health care workers involved in their care revealed numerous unprotected exposures.

Some 44% of health care workers entered a patient room or were within 10 feet of a patient without wearing a mask. A similar proportion

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(40%) of those with exposure to a coughing patient failed to wear a respirator, and 39% had direct contact with one of the SARS patients without wearing gloves.

Goggle use was the most neglected form of protective equipment (PPE); 70% of the health care workers surveyed said they provided care for a SARS patient without wearing goggles.

The confirmed SARS patients had less severe illness, and few required droplet- or aerosol-producing procedures, such as intubation or bronchoscopy, compared with those in countries that suffered from hospital-based outbreaks. "The bottom line is we don't know why [the U.S. experience differed from that of Canada, Hong Kong, and other countries]," says **L. Clifford McDonald, MD**, a CDC medical epidemiologist and SARS task force member. "There was a lack of transmission to health care workers despite opportunity."

Worldwide, hospitals were a major focus of SARS transmission, not just among health care workers, but of patients and visitors, as well. For example, in Toronto, 28% of all suspected and probable cases occurred among hospital patients and visitors.

Now the CDC is focused on improving SARS preparedness in hospitals. At a meeting with representatives from leading health organizations, including the World Health Organization, Health Canada, the American Hospital Association, the Joint Commission on Accreditation of Healthcare Organizations, the American College of Occupational and Environmental Medicine, and other physician organizations, the CDC solicited ideas about how to prevent hospital spread if SARS recurs.

"We need some new initiatives in terms of early recognition," McDonald adds. "When the hospitals recognize the patients early on, there is going to be less exposure. . . . We [also] need to redouble our educational efforts to get people to use the personal protective equipment."

Early detection and protection — those key responsibilities will involve employee health, along with infection control. Hospitals should report any cluster (two or more cases) of confirmed pneumonia among health care workers to the health department, CDC officials say.

Physicians should evaluate the cases for an alternative diagnosis. If none is found after 72 hours, they should consult with the health department and consider SARS testing, according to the draft recommendations.

Abnormal chest X-rays are a key clinical feature of the disease. For example, all of the U.S. patients with laboratory-confirmed SARS had abnormal chest X-rays by day 10. "It appears this is pneumonic illness almost exclusively," Jernigan says.

The logistics of monitoring health care workers may be difficult, particularly since some are contract employees. It requires follow-up of workers who are hospitalized with pneumonia of unknown etiology, CDC officials explain.

Hospitals and physicians should add the question "Are you a health care worker?" to their work-up of patients with pneumonia, Jernigan adds.

CDC is tailoring its recommendations to the level of SARS activity worldwide, in the community, and in the facility, from category 0 (no cases) to category 3 (nosocomial spread with no clear source). The presence of SARS in the community

Hospital Employee Health® (ISSN 0744-6470), including **JCAHO Update for Infection Control** and **Bioterrorism Watch**, is published monthly by Thomson American Health Consultants, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodicals postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Hospital Employee Health®**, P.O. Box 740059, Atlanta, GA 30374.

Subscriber Information

Customer Service: (800) 688-2421 or fax (800) 284-3291. Hours of operation: 8:30 a.m.-6 p.m. Monday-Thursday, 8:30 a.m.-4:30 p.m. Friday EST. E-mail: customerservice@ahcpub.com. World Wide Web: www.ahcpub.com.

Subscription rates: U.S.A., one year (12 issues), \$449. Outside U.S., add \$30 per year, total prepaid in U.S. funds. Two to nine additional copies, \$359 per year; 10 to 20 additional copies, \$269 per year. For more than 20 copies, contact customer service for special handling. Missing issues will be fulfilled by customer service free of charge when contacted within 1 month of the missing issue date. **Back issues**, when available, are \$75 each. (GST registration number R128870672.)

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This continuing education offering is sponsored by Thomson American Health Consultants, which is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing, provider number CEP 10864, for approximately 18 contact hours per year.

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Editor: **Michele Marill**, (404) 636-6021, (marill@mindspring.com).

Vice President/Group Publisher: **Brenda Mooney**, (404) 262-5403,

(brenda.mooney@thomson.com).

Editorial Group Head: **Coles McKagen**, (404) 262-5420,

(coles.mckagen@thomson.com).

Senior Production Editor: **Ann Duncan**.

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Editorial Questions

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brings more intense surveillance of employee illness. For example, at Scarborough Grace Hospital in suburban Toronto, employee health professionals contacted all health care workers who were considered at risk because of possible contact with a SARS patient. They regularly screened employees for SARS symptoms. That surveillance of health care workers led to the detection of a second phase of the SARS outbreak, after Toronto officials believed the disease was under control.

CDC also advocates more widespread use of contact precautions. Every patient presenting with respiratory symptoms should be given a surgical mask to prevent droplet spread, CDC officials advised. Triage nurses and emergency department (ED) staff may choose to wear masks to provide additional protection.

In the first days of the SARS illness, the symptoms may be mild and vague, such as fever, aches, chills, and headache. Only 30% of SARS patients have respiratory symptoms at the onset of the disease, Jernigan says. "There's going to be no way to tell who has SARS and who doesn't," he says. "It's going to be the epidemiologic link [that's important]."

The antibody response may take up to 28 days to reach a detectable level. And the PCR test, which measures that antibody response, has a low specificity when there are few or no confirmed cases of SARS worldwide. In other words, sporadic reports of SARS infection may reflect false positives, CDC officials point out.

With that in mind, EDs may need to reevaluate their overall approach to PPE, explains **Henry Siegelson, MD, FACEP**, an emergency physician at WellStar Cobb Hospital in Austell, GA, and clinical assistant professor of emergency medicine at Emory University in Atlanta. Siegelson, who represented the American College of Emergency Physicians at the CDC meeting, says information presented about SARS transmission is influencing his attitude toward PPE.

"Based upon the potential consequences of uncontrolled nosocomial infection, we need to be proactively involved in [prevention]," he says. "I think when you go into the clinic environment in the emergency department, where you have contact with the family and with patients, you should wear contact precautions."

In the past SARS outbreak, questions arose about the appropriate use of PPE. The CDC is still developing guidance on what protection health care workers should wear and when they should wear it. But the draft recommendations reflect

CDC: Stop the spread of SARS at the doorway

In the past outbreak of severe acute respiratory syndrome (SARS), some visitors, patients, and employees were exposed to the virus before anyone was aware that another patient or visitor was infected. That shows the importance of early detection — and of prevention strategies that start at the doorway of the hospital. The Centers for Disease Control and Prevention in Atlanta offers these suggestions:

- Post visual alerts at facility entrances advising patients to report symptoms of a respiratory infection. The signs can instruct patients on how to prevent exposing others.
- Designate waiting areas for patients who have symptoms of a respiratory infection that are segregated from those who do not have symptoms of illness.
- Create physical barriers between patients and triage or reception personnel.
- Promote respiratory etiquette. Instruct all patients, visitors and health care workers to cover their nose and mouth when coughing or sneezing.
- Make hand hygiene products and tissues available in waiting areas.
- Offer a surgical mask to patients and visitors who have symptoms of a respiratory infection. ■

Continue to search for the epidemiologic link to SARS

If no severe acute respiratory syndrome (SARS) cases have been identified worldwide, the Centers for Disease Control and Prevention in Atlanta recommends asking some key questions to patients who are hospitalized with radiologic-confirmed pneumonia:

- ✓ Have you traveled to or had close contact with ill people who have a history of travel to a previously SARS-affected area within 10 days of the onset of illness?
- ✓ Are you a health care worker with direct patient care responsibilities?
- ✓ Have you had close contact with someone who was recently found to have evidence of pneumonia on chest X-ray with no alternative diagnosis? ■

one conclusion: PPE and hand hygiene can prevent spread of SARS — if employees are vigilant.

The CDC recommends the use of standard, contact, and airborne precautions, which include goggles, gloves, gowns, and respiratory protection. (The use of head covers and shoe covers has not been recommended.)

“Experience has shown that rigid adherence to infection control procedures is essential in controlling outbreaks of SARS, and that even minor lapses in technique can lead to transmission,” the CDC draft recommendations state.

How employees don the gear, or even how they remove it, may not be the key concern, as long as they practice hand hygiene to prevent self-contamination, says **Linda Chiarello**, RN, MS, of CDC’s division of healthcare quality promotion.

“What’s more important is how people are wearing it,” she says. “People touch their eyes; they touch their face. They’re not aware of it.”

Hospitals should provide education about the use of PPE, including N95 fit-testing, CDC advises. They should also consider the staffing that would be required to treat SARS patients, allowing for employees to take breaks and remove the PPE, Chiarello adds. “People were absolutely exhausted [after wearing PPE]. People need to be able to get out of the [SARS-affected] area.”

PPE is just one facet of an overall SARS preparedness plan. Here are some other considerations, according to CDC:

- SARS preparedness may be incorporated into preparedness plans for smallpox or other infectious disease emergencies, such as pandemic influenza. **(For more information on smallpox preparedness, see related article, p. 146.)**
- Coordination with public health departments to create communitywide planning is crucial.
- Hospitals should plan for different scenarios. What would happen if a SARS patient comes

to the ED? What if you realize an existing patient has SARS?

- Assessment of staffing needs should include housekeeping. Hospitals may consider training staff designated to clean SARS patient rooms.
- Hospitals should have a plan for screening patients, visitors, and health care workers on entry to the facility, if that should be indicated due to concerns about SARS transmission. ■

Anatomy of an illness: Canada learns IC lessons

Outbreaks show evidence of contact ‘superspread’

Perhaps the most intriguing aspect of the severe acute respiratory syndrome (SARS) epidemic was its patterns of spread. Sometimes, few people became infected, despite exposure. In other cases, dozens of people became ill.

In most cases they tracked, epidemiologists were able to find links. “SARS can usually be associated with close contact with another known case,” says **L. Clifford McDonald**, MD, a medical epidemiologist and member of the Centers for Disease Control and Prevention SARS task force.

But the “superspreaders” — people who are able to infect many others — present an infection control and employee health challenge.

Consider the cases of “Mr. A” and “Mr. B” in the index hospital in Toronto. The first time Mr. D came into the hospital, he was asymptomatic. After a short stay, he was discharged, and then readmitted with a myocardial infarction on March 13. On the second day of his stay, he developed very small infiltrates on his chest X-ray, but he did not seem to have SARS.

Within four days, other cases of SARS began to emerge. He had infected nine employees, five patients, and three visitors in the coronary care unit. On the adjacent unit, where he had stayed, five employees, four patients, and four visitors developed SARS. One employee, one patient, and one visitor apparently were infected in the area immediately outside the coronary care unit.

On March 15, Mr. B entered the emergency department (ED) in airborne precautions as a suspected case of SARS and was placed in an isolation room. His wife registered him at about 11:30 p.m., went to his room at about midnight, then stayed the remainder of the night.

Health Care Workers with SARS

Country	Cases	HCWs	% HCWs
China	5,327	1,002	19%
Hong Kong	1,755	386	22%
Taiwan	665	86	13%
Singapore	238	97	41%
Vietnam	63	36	57%
Canada	250	108	43%

Source: Centers for Disease Control and Prevention, Atlanta. Unpublished data; Sept. 2003.

Five of approximately 38 visitors to the ED were infected, "four of whom left the department between 10:45 p.m. and midnight," explains **Allison McGeer, MD, FRCPC**, director of infection control at Mount Sinai. Also infected: eight staff members including nurses, security guards, clerks, and housekeepers. "This is not obviously an airborne [transmission]," she says. "Nobody who arrived in the department after she left got sick. She left nothing behind her in the air. She left nothing behind her in the environment that made people sick afterward. But it's droplet transmission at much longer than expected distances.

"We just got unlucky, and we had three people who shed very large quantities," she says.

McGeer also notes that 25 health care workers became infected with SARS while using personal protective equipment. Only three of those were in the second phase of the outbreak, when staff were well educated in using precautions and alert to the risks of breaks in infection control.

"SARS precautions work. They work very well, if not quite perfectly," she adds. "It's not recognizing cases that's going to get you in trouble."

McGeer also advises hospitals to rethink policies that inadvertently may encourage health care workers to come to work sick. "We've worked very hard at reducing absenteeism. That is a very bad thing when it comes to spreading viral respiratory disease in hospitals." ■

JCAHO to hospitals: Hand hygiene counts

Compliance will affect accreditation

How well your employees comply with proper hand hygiene may affect not only hospital-based infections, but accreditation ratings as well.

As of Jan. 1, hand hygiene/infection control becomes one of the seven National Patient Safety Goals of the Joint Commission on Accreditation of Healthcare Organizations, which means it will be a focus of both announced and unannounced surveys. Employee health will be working closely with infection control practitioners to demonstrate effective training of staff and volunteers and compliance with guidelines of the Centers for Disease Control and Prevention.

"The adherence of health care workers to recommended hand washing practices has been

unacceptably low for decades," says **John M. Boyce, MD**, chief of the section of infectious diseases at the Hospital of Saint Raphael in New Haven, CT, and clinical professor at Yale University School of Medicine. Boyce was one of the authors of the CDC hand hygiene guidelines.

"I'm very optimistic that having the Joint Commission make hand hygiene an important issue is going to really help improve hand hygiene practices among health care workers," he says.

Health care workers use proper hand hygiene only about 40% of the time, a review of studies has shown.¹ Meanwhile, more than 2 million patients acquire nosocomial infections every year, resulting in some 88,000 related deaths.²

This year's outbreak of SARS, which affected hundreds of health care workers, patients, and hospital visitors, added to the spotlight on hand hygiene. The Joint Commission also has made infection control one of three "highest priority focus areas" for random unannounced surveys in 2004.

Joint Commission surveyors will ask hospital administration about their hand hygiene practices and their choice of product. Then they actually will observe compliance as they follow the care of individual patients, says **Rick Croteau, MD**, the Joint Commission executive director for strategic initiatives.

"We will be conducting our survey process primarily where the care is delivered," he says. "We will be talking to caregivers and observing them as they provide care."

Hospitals have long sought to improve hand hygiene. The Joint Commission action not only gives weight to those efforts — the accreditation agency has advised specific actions.

In a *Sentinel Event Alert* issued earlier in the year, the Joint Commission recommended the use of alcohol-based rubs. The organization also noted that patient death or permanent injury or loss of function due to a nosocomial infection meets the criteria for a "reviewable sentinel event" and should be the focus of root-cause analysis to determine "risk reduction strategies."³ **(For more information on conducting a root-cause analysis, see *Hospital Employee Health*, September 2003, p. 116.)**

At some hospitals, those strategies include revising competency assessments, defining supervisory expectations, and implementing tracking systems, the Joint Commission says.

But JCAHO doesn't require specific activities or even the use of alcohol-based products, Croteau

says. "We want to know what their policies are, but the bottom line is, 'Are they doing it?'"

The Joint Commission action is sure to get the attention of hospital leadership — and that in itself may give a boost to employee health and infection control professionals who seek to improve hand hygiene, Boyce notes.

"I think for so many years, something as low tech as hand washing or other ways of cleaning your hands just didn't receive enough attention," he says. "If you're going to really modify behavior in a hospital setting, you need to get the hospital administration behind it."

Hospitals may need additional resources, such as the purchase of new alcohol-based products as well as staff training. But lack of knowledge isn't the major impediment to better hand hygiene, notes **Elaine Larson**, RN, PhD, a hand hygiene expert who is associate dean for research at Columbia University School of Nursing in New York City. What hospitals need are performance improvement projects that help change behavior, she says. "Infection prevention is really as much a behavioral challenge as it is a biologic challenge," she says. "We know a lot about how to prevent infections. Most people feel it's not an educational deficit; it's a motivational deficit."

Hand hygiene experts know some factors that improve compliance with hand hygiene. Alcohol-based rubs can be more convenient and less irritating to employees' hands, but they also have different characteristics that may affect their acceptance.

At the Hospital of Saint Raphael, compliance with hand hygiene improved by 20% with the use of an alcohol-based rub that was favored by employees. Employee involvement in the selection of the product played a role in that success, Boyce says. "We tested a variety of different products before we selected one. The one we selected is very well liked. It's very well tolerated. It doesn't have a strong smell. Importantly, the dispensers work well."

Education and motivational campaigns should accompany the introduction of new hand hygiene products, he says. But the efforts don't end there. Boyce advises hospitals to monitor hand hygiene and provide reports to units about compliance. "In fact, feedback is one of the measures that appears to have been most helpful in modifying behavior in an organizational setting."

Health care workers may not always make a connection between their hand hygiene and potential risks to their patients. But it turns out

that gaps in hand hygiene also may present some risks to the employees themselves.

Larson and her colleagues took hand cultures of nurses every three months for two years. Her finding: The longer someone had worked as a nurse, the more antibiotic-resistant flora they had on their hands.

While that flora may not affect them while they're healthy, it could put them at risk for infections if they have surgery or other procedures, she notes. So hand hygiene has a direct benefit not just to patients, but to employees, says Larson, who has not yet published her data.

"You're protecting not only the patient, you're protecting yourself from picking up antibiotic resistance," she says.

References

1. Boyce JM, Pittet D. Guideline for hand hygiene in health care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR* 2002; 51(RR16):1-44
2. Centers for Disease Control and Prevention. Monitoring hospital-acquired infections to promote patient safety — United States, 1990-1999. *MMWR* 2000; 49:149-153.
3. Joint Commission on Accreditation of Healthcare Organizations. Infection control-related sentinel events. *Sentinel Event Alert* Jan. 22, 2003. ■

Voters' choice: Does ergo save workers or kill jobs?

Ballot initiative could repeal Washington rule

Once again, a controversial ergonomics rule has come under fire. But this time, voters in Washington state will be the ones to decide whether to keep the rule or repeal it. The outcome of Initiative 841 on the Nov. 4 ballot could have implications for ergonomics efforts across the nation.

"It would set us back," says **Bill Borwegen**, MHP, health and safety director of the Service Employees International Union (SEIU), which is hoping to strengthen the California ergonomics regulation, the only other one in the country.

Washington state's rule requires businesses to identify "caution zone jobs" that put workers at risk and to reduce the hazards of musculoskeletal disorder (MSD) injuries.

(Continued on page 143)



JCAHO Update for Infection Control

News you can use to stay in compliance

JCAHO slates national infection control conference

High profile emphasis may translate to program resources

With hospital administrators a key target audience, the Joint Commission on Accreditation of Healthcare Organizations has slated a national infection control conference that will emphasize the importance of adequately funding an increasingly important program.

"Infection control is a top priority at the Joint Commission," says **Charlene Hill**, Joint Commission spokeswoman.

JCAHO's National Conference on Infection Control: Rethinking the Approach to Nosocomial Infections, Bioterrorism and Emerging Pathogens is slated for Nov. 17-18, 2003, in Chicago.

"The reason for the conference stems from our concern about infection control in organizations — whether organizations are really prepared," says **Julie L. Hopkins**, executive director of education at Joint Commission Resources, a JCAHO affiliate. "As we have seen with SARS [severe acute respiratory syndrome], you can have something come up unexpectedly and it can really cripple the health care system."

There will be some discussion of the Joint Commission's proposed new 2004 and 2005 infection control standards, but that area will receive more emphasis during a special half-day post-conference, she said. Thus, the conference will not focus so much on accreditation and compliance as the importance of infection control programs in an era of emerging infections and bioterrorism.

"Our focus will start out globally, then go to more of a national and regional level and then down to the organizational level," Hopkins says. "And in those different arenas, we will look at the situation with emerging pathogens and the potential for bioterrorism incidents. As we get

more to the organizational level, we will be looking at reduction of nosocomial infections."

In addition to infection control professionals and hospital epidemiologists, the target audience includes top health care administrators, she says.

"We are encouraging CEOs and the CFOs to attend because we are looking at the allocation of resources," Hopkins says.

Indeed, infection control experts have argued for years that institutional investments in ICP programs translate to huge savings because prevention has always been cheaper than treatment. The latest example is SARS, with Canadian experts specifically noting that underfunded infection control programs contributed to the prolonged outbreak in Toronto.

"The Joint Commission's audience are the CEOs and managers — the folks that make the big-bucks decisions," says **William Scheckler**, epidemiologist at St. Mary's Hospital in Madison, WI. A scheduled speaker at the conference, he previously chaired a panel that outlined the resources and infrastructure needs of a modern infection control program.¹

The Joint Commission's increasing focus on infection control may finally result in full funding for some of the panel's recommendations, which included a call for adequate staffing and supporting resources for hospital infection control programs.

The Joint Commission conference continues a flurry of infection control developments at JCAHO, which is taking an increasingly serious view of the field and its practitioners. In that regard, one of the Joint Commission's 2004 Patient Safety Goals is reducing health care-acquired infections. (See related story, p. 142.) To do that, JCAHO urges all

facilities to comply with hand hygiene guidelines issued by the Centers for Disease Control and Prevention.

In addition, institutions should manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a health care-acquired infection. The Joint Commission also has drafted prescriptive new infection control standards for 2005 and put the field at the top of the list for surprise inspections next year.

In addition to hospitals, the upcoming JCAHO conference will address infection control in ambulatory care, home care, and long-term care organizations. Conference topics include:

- JCAHO's proposed new infection control standards and 2004 National Patient Safety Goals.
- Redefining the roles and skills of infection control professionals.
- Pros and cons of data-driven surveillance.
- How effective infection control programs influence the bottom line.
- Preparedness for bioterrorism, pandemics, and emerging pathogens.
- Lessons learned from SARS, HIV/AIDS, and West Nile virus.

[The registration fee for JCAHO's national conference on infection control is \$545. For more information or to register, call JCR customer service toll-free at (877) 223-6866, 8 a.m. to 8 p.m. CT, weekdays.]

Reference

1. Scheckler WE, Brimhall D, Buck AS, et al. Requirements for infrastructure and essential activities of infection control and epidemiology in hospitals: A consensus panel report. *Infect Control Hosp Epidemiol* 1999; 19:114-126. ■

Spotlight special projects during JCAHO inspections

Multidisciplinary effort impresses surveyor

Don't be shy about emphasizing your success stories when an accreditation surveyor begins making the rounds.

An infection control professional who did just that — including posting a display board outlining the program in a neonatal intensive care unit (NICU) — received glowing reviews during an inspection by the Joint Commission.

“When the surveyor came and looked at the story board and saw the whole process, she was really impressed that we had done this interdisciplinary project and that we had displayed it the way that we did,” says **Ellen Novatnack**, RN, BSN, CIC, infection control professional at St. Luke's Hospital in Bethlehem, PA.

Concerns mounted when Novatnack and colleagues found that central/umbilical line-associated bacteremia rates in a low birth weight (less than 1,000 g) NICU were above the 90th percentile when benchmarked against other surveillance hospitals in the Centers for Disease Control and Prevention's (CDC) National Nosocomial Infection Surveillance (NNIS) System.

At the same time, device (central and umbilical line) utilization ratios were below the 25th percentile when compared to other NNIS hospitals, so the ICPs hypothesized that the high infection rates were related more to infection control issues than to device use. There were a variety of pathogens involved, but the primary culprit appeared to be coagulase-negative staphylococcus.

Hospital representatives from infection control, the NICU, and support services collaborated to identify problems, make recommendations, and provide staff education, she says. Overall, some 36 interventions were implemented, including a key change in hand hygiene.

“We went to a waterless agent, and we actually put a pump at every single bedside,” Novatnack says. “Because the way our NICU is set up, there were only four sinks in the geographical area of 20 cribs. So we put a pump at every bedside.”

Following the interventions, the NICU reported six consecutive months of zero infections, achieving a new benchmark status below the 10th percentile in the NNIS system. The NICU staff gained a heightened awareness that infection control preventive activities reduce infection rates, she says. And, as noted, a JCAHO surveyor was impressed with the multidisciplinary approach and favorable results.

“Joint Commission was on its way, so we wrote this up as a performance improvement project and put it on story board,” Novatnack says. “So we actually had this on a display board in the NICU, because one of the things that Joint Commission looks for is whether you are getting information back to staff. This truly was an interdepartmental project. We wanted them to see that we went through all of us, made changes, and the results were positive because the rates were lowered.” ■

JCAHO addresses PPR liability concerns

Lawyers, risk managers cite disclosure dangers

The Joint Commission has created two options designed to address legal disclosure concerns related to its Periodic Performance Review (PPR). The PPR is an integral component of the Joint Commission's new accreditation process that debuts in 2004.

The PPR process requires each accredited organization to conduct a midcycle self-assessment against applicable Joint Commission standards; develop a plan of action to address identified areas of noncompliance; and identify measures of success for validating resolution of the identified problem areas when the organization undergoes its complete on-site survey 18 months later.

Under the usual PPR process, organizations will be expected to share all of this information with the Joint Commission at the midcycle point. Joint Commission staff will work with the organization to refine its plan of action to assure that its corrective efforts are on target.

Legal implications

However, health care lawyers and risk managers recently have expressed concerns about the potential discoverability of PPR information, particularly where it is shared with the Joint Commission.

To address these concerns, the Joint Commission has been working with health care legal experts to explore potential options for mitigating these concerns while maintaining the integrity of the PPR process. The two options developed and approved thus far are as follows:

OPTION 1

This approach has been designed to address "waiver of confidentiality" concerns that could arise if the organization shares sensitive performance information with the Joint Commission.

Under Option 1, the organization does the following:

- Performs the midcycle self-assessment, and develops the plan of action and measures of success.
- Attests that it has completed the foregoing activities but has, for substantive reasons, been

advised not to submit its self-assessment or plan of action to the Joint Commission.

- May discuss standards-related issues with Joint Commission staff without identifying its specific levels of standards compliance.
- Provides its measures of success to the Joint Commission for assessment at the time of the complete on-site survey.

OPTION 2

This option has been designed to address concerns that the very requirement for a self-assessment at a specified point in time may create a vulnerability to discovery of the self-assessment findings and any related plan of action.

Under Option 2, the organization does the following:

- Need not conduct a midcycle self-assessment and develop a plan of action.
- Will undergo an on-site survey at the midpoint of the organization's accreditation cycle.
- The survey will be approximately one-third the length of a typical full on-site survey.
- The organizations will be charged a fee to cover the costs of the survey.
- Develops and submits to the Joint Commission a plan of action to address any areas of non-compliance found during the on-site survey. The Joint Commission will work with the organization to refine its plan of action.
- Provides its measures of success to the Joint Commission for assessment at the time of the complete on-site survey. ■

Joint Commission seeking core measure test sites

Two measures deal with infection prevention

The Joint Commission is seeking volunteer hospitals with intensive care units (ICU) that would like to be considered for participation in a pilot test of six proposed ICU core measures.

The core measures include ventilator-associated pneumonia and central line associated bloodstream infections (BSIs).

The pneumonia measure will look at the relationship between patient head elevation and the development of vent-related pneumonia.

The numerator statement for the measure is

the number of ventilator days during which the head of the patient's bed is elevated at least 30 degrees. The denominator is the total number of ventilator days.

The central line BSI measure numerator is central line BSIs by type of ICU. The denominator is the number of central line days by type of ICU.

The pilot test will consist of a four-month period of data collection with monthly transmissions to the Joint Commission. The objectives of the pilot test include:

- evaluation of the reliability of the measure set on three dimensions (the data element level, the measure level, and the accuracy and completeness of case finding);
- evaluation of the data collection effort;
- assessment sampling strategies;
- evaluation and validation of risk models.

Pilot sites will be selected based on criteria that will allow for the broad representation of ICUs across the country necessary to test the measures.

Based on information received, approximately 100 hospitals will be identified and contacted. Pilot sites will be provided with detailed measure specifications, data abstraction/collection tools, abstractor guidelines, and training prior to the implementation of the pilot test.

For more information on the pilot project, go to: www.jcaho.org. ■

2004 Patient Safety Goals include hospital infections

Reduce infections, report sentinel events

Don't forget, new Patient Safety Goals — including reducing nosocomial infections — go into effect as of Jan 1, 2004.

Joint Commission surveyors will be looking for signs of implementation of the following:

1. Improve the accuracy of patient identification.
 - A. Use at least two patient identifiers (neither to be the patient's room number) whenever taking blood samples or administering medications or blood products.
 - B. Prior to the start of any surgical or invasive procedure, conduct a final verification process, such as a time out, to confirm the correct patient, procedure, and site, using active — not passive — communication techniques.
2. Improve the effectiveness of communication among caregivers.
 - A. Implement a process for taking verbal or telephone orders or critical test results that require a verification read-back of the complete order or test result by the person receiving the order or test result.
 - B. Standardize the abbreviations, acronyms and symbols used throughout the organization, including a list of abbreviations, acronyms, and symbols not to use.
3. Improve the safety of using high-alert medications.
 - A. Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride > 0.9%) from patient care units.
 - B. Standardize and limit the number of drug concentrations available in the organization.
4. Eliminate wrong-site, wrong-patient, wrong-procedure surgery.
 - A. Create and use a preoperative verification process, such as a checklist, to confirm that appropriate documents (e.g., medical records, imaging studies) are available.
 - B. Implement a process to mark the surgical site and involve the patient in the marking process.
5. Improve the safety of using infusion pumps.
 - A. Ensure free-flow protection on all general-use and PCA (patient controlled analgesia) intravenous infusion pumps used in the organization.
6. Improve the effectiveness of clinical alarm systems.
 - A. Implement regular preventive maintenance and testing of alarm systems.
 - B. Assure that alarms are activated with appropriate settings and are sufficiently audible with respect to distances and competing noise within the unit.
7. Reduce the risk of health care-acquired infections.
 - A. Comply with current hand hygiene guidelines by the Centers for Disease Control and Prevention.
 - B. Manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with a health care-acquired infection. ■

(Continued from page 138)

The rule becomes effective on a staggered timeline, with the more hazardous industries, such as nursing homes, the first that must comply. Hospitals were required to begin assessing job hazards by July 1, 2003, and to begin reducing those hazards by July 1, 2004.

Concerns about the costs and burden of the rule arose as soon as it was adopted by the Washington Department of Labor and Industries in 2000. Based on the advice of the Blue Ribbon Panel on Ergonomics, which was appointed to consider the feasibility and impact of the rule, Gov. Gary Locke delayed enforcement for two years. For that period, employers will not be fined if they are not in compliance. **(For more information on the Washington rule, see *Hospital Employee Health*, July 2002, p. 78.)**

Yet Washington business leaders want the rule quashed altogether. The Washington State Hospital Association has remained neutral and has not endorsed the initiative.

"Every business in the state must follow this one-size-fits-all ergonomics rule," says **Erin Shannon**, public relations director for the Building Industry Association of Washington in Olympia. "Washington's rule is actually more restrictive than the rule that was overturned by Congress."

The business coalition tried but failed to get support from the state legislation to repeal the rule, or to make compliance voluntary. A superior court judge upheld the process of adopting the rule. As of press time, the state Supreme Court had not ruled on arguments that the rule was adopted improperly.

Meanwhile, the business coalition gathered 260,000 signatures to place an initiative on the ballot and began to campaign for repeal of the rule. "You have to let the voters have the final say," Shannon says.

Their slogan: Ergonomics is a job killer. The business coalition asserts that the rule will discourage businesses from coming to Washington. They also say it will unnecessarily restrict workers from being able to fulfill their job tasks by limiting the amount of time they can do "hazardous" activities.

Rule will save more \$ than it costs

The Department of Labor & Industries is vigorously defending its rule, asserting that it saves employers money in reduced workers' compensation and medical costs and other indirect

expenses. In fact, the agency estimates that the rule will cost employers \$80.4 million annually, while it will prevent 40% of MSD injuries, saving about \$340.7 million annually.

Before creating the rule, it surveyed Washington employers and found that 40% knew of MSD hazards in their workplaces but had not used ergonomics interventions to reduce them.

"The rule allows the employer choices for meeting the requirement to reduce employee exposure below hazardous levels or to the degree economically and technologically feasible," the department said in a written response to criticisms. "It does not dictate the methods employers must use to meet the requirement for hazard reduction."

Yet even that flexibility has been criticized. "How are businesses supposed to know whether or not they're meeting that vague standard?" Shannon asks.

Labor unions are mobilizing to defeat the initiative, calling it misleading and cynical.

"What they don't want to talk about is job safety," says **David Groves**, spokesman for the Washington State Labor Council in Seattle. "Their pollsters have told them that's a losing position, that people won't vote to repeal job safety. They're cynically taking advantage of a weak economy and everybody's fears about losing their job and suggesting that passing this initiative will somehow maintain jobs."

Many employers began implementing ergonomics programs voluntarily, or in response to the rule, Groves says. "But there continue to be some employers and some special interest lobbying groups that are just ideologically opposed to the government forcing them to do anything. Those are the people financing this initiative," he says.

If Initiative 841 passes, the state will be prohibited from creating an ergonomics rule until there is a federal standard. Congress repealed the U.S. Occupational Safety and Health Administration's ergonomics rule in 2001. The agency now relies on a "comprehensive approach" that involves voluntary compliance and limited enforcement through the General Duty clause of the federal Occupational Safety and Health Act that requires employers to maintain a workplace free of known, serious hazards.

(Editor's note: For a full description of the Washington ergonomics rule and related resource information, go to the Washington Labor & Industries web site: www.lni.wa.gov/wisha/ergo/default.htm.) ■

Beyond slogans: How to build a culture of safety

Red rules, raising risk awareness are keys

Safety culture (n): 1. A set of values and beliefs that results in fewer employee injuries and medical errors. 2. What all hospitals want but too few have.

In employee health, “safety culture” is the Holy Grail. If you have a strong one, employees are more likely to comply with rules and use equipment designed to protect them and their patients. But what is a safety culture? How do you get one?

Those are questions that **Craig Clapper**, PE, CQM, MBA, partner and chief operating officer of Performance Improvement International in San Clemente, CA, has studied — not just in health care, but in the work of business effectiveness gurus such as Jim Collins, author of *Built to Last*, and the efforts of the nuclear power industry, where accidents could be catastrophic.

He has adapted techniques that can be put in place in hospitals to make “safety first” more than just a slogan. “People aren’t really articulating what this thing called safety culture is. We’re just complaining that we don’t have it.”

In fact, everyone has a safety culture, Clapper says. Some are strong; many are weak. “In health care, the culture is one of work arounds and shortcuts.” By starting with basic values, setting up a few absolute rules, and establishing behavior-based expectations, hospitals can create an environment that places a higher premium on safety, he says.

A case in point: Sentara Norfolk (VA) General Hospital launched a safety initiative that included commitment from top leadership, a safety coaches program, and a four-hour hospitalwide training program: Behaviors for Error Prevention. Clapper has helped the hospital assess its current safety climate and establish a performance improvement plan.

“This isn’t just a project to improve patient safety. This is an initiative to improve the overall safety of everyone who works, visits, or is treated at our hospital,” says **Carole Stockmeier**, MHA, director for cancer services and one of the coordinators of the safety initiative.

“We’re not just going to go for a behavioral change. We’re trying to make a change to our whole foundation and create a culture in which

safety is what we’re all about,” says **Cindy Parker**, director of operational support and also one of the coordinators of the safety initiative. “This isn’t flavor of the month. It’s there in everything we do.”

Here are a few key aspects of the Norfolk General safety initiative:

- **The vision thing.** It might sound trite, but every successful program starts with a slogan. At Norfolk General, the hospital stated, “Patient safety starts with me.”

The idea is to link all aspects of safety — for patients, employees, and visitors — and to personalize it. Everyone shares the responsibility.

Senior administrators endorsed the program and agreed to provide resources for consultants, training, and ongoing performance improvement.

“Changing culture is a very long process,” says Stockmeier. “It requires that you stick to it and that you don’t allow other things to divert your attention from the task you have at hand.”

The vision and the mission give a sense of purpose to your program, Clapper adds. “To change culture, you probably do have to start out with a poster. You have to define and demonstrate that new expectation that we want everyone to believe in. Companies that do well with safety culture have amazingly simple mission statements.”

Of course, the vision is just the beginning. Leaders then need to follow up with a set of behaviors and expectations, “describing what behaviors are consistent with that overall statement of purpose,” Clapper says.

- **Red rules.** Sometimes, there is no compromise for safety. You want the staff to follow the rule in all cases. Clapper calls that a “red rule. It gives you the ability to convey [a strong] expectation or conviction.”

For example, Norfolk General has a red rule that requires surgeons to identify the surgical site and confirm it with the surgical team before taking hold of the scalpel. No exceptions.

Zero lift is an example of an employee health-related red rule. A hospital might set up a policy that requires the use of a lifting device with any fully dependent patient. Norfolk General is in the process of identifying additional red rules.

“Some red rules will be the same across all departments. Others will be specific to departments,” Stockmeier says. “You want them to be few in number, and you want them to be significant. It’s a few key words that focus an employee in on remembering a specific action or behavior.” She estimates that the hospital will settle on a maximum of three to five red rules per department.

Managers will designate the red rules, and senior leadership will sign off on them. Then employees will receive information about the rules and expectations. "We are going to be reminding managers that we have a code of conduct policy," she says. "That code of conduct policy covers failure to comply with performance expectations."

- **The three-factor formula.** There are three factors that work together to determine how likely employees are to comply with safety practices, Clapper explains. Consider the perceived burden or effort as the numerator. In the denominator is the risk awareness and the culture of compliance.

"Whenever the [perceived] burden is high, noncompliance is high," he says. "Whenever risk awareness is low, noncompliance is high. Whenever your culture or your shared value on safety is low, then compliance is low. It's very situationally specific."

For example: At one hospital, workers smelled smoke coming from a cable tunnel. They went to investigate a fire. "The work rule is that we verify that the atmosphere contains enough oxygen and doesn't have explosive gas until we enter. Our little gas meter is actually stored at another facility. The time and effort to get it gives you the burden. So they chose just to go in," says Clapper. Five employees had to be treated for symptoms of headaches and dizziness for not using the proper protective equipment while handling the fire.

Another case in point: Needlesticks occur when employees fail to activate the safety features of needle devices. Most likely, they do not have a strong sense of risk awareness, he says. A consistent emphasis on needle safety, through training and accountability, can also build better work habits and a culture of compliance, he says.

"The people who go to driving school are not taught about how to drive better. Their risk awareness is raised about the importance of driving better," Clapper points out. "The other thing I'd work on is the culture of compliance — half of it comes from leaders, the other half comes from peers. You have to define it, then work on the knowledge and skills, and then work on accountability."

- **Continual feedback.** Accountability for safety can be built into performance evaluations. But continual feedback is critical, as well — and it should be delivered in a dose of five times as much positive feedback as negative, he says. Nurse managers should conduct "safety rounds" and catch employees doing something right — using alcohol-based hand rubs for hand hygiene, for example, or activating safety devices. A simple look of approval or

thumbs up is all that is needed.

"You take all the rah-rah out of it," he says. "You might sympathize with them, saying 'I know this is inconvenient for us, but it's important.' Health care workers are motivated by knowledge and excellence." ■

Tailor your message to boost flu vaccine

Reasons for rejecting vaccine vary by unit

If you're struggling to improve your influenza vaccination rates, consider this: You may need to tailor your message to particular hospital units.

A survey of 1,000 health care workers at 15 children's hospitals found an overall median rate of vaccination of 53%. But the vaccination patterns varied by unit, as did attitudes about the vaccine, says lead author **Kris Bryant**, MD, assistant professor of pediatrics at the University of Louisville and hospital epidemiologist at Kosair Children's Hospital in Louisville.

"In general, health care workers who worked in high-risk areas — the neonatal intensive care unit [NICU], pediatric intensive care unit [PICU], and oncology — had rates that were higher than the hospital rates at large," she says. "Potentially, those people are getting the message. They know the children they work with are at risk for severe complications from influenza, and they are getting immunized in greater numbers than health care workers at large."

In fact, the No. 1 factor that health care workers said "strongly influences" their decision to get the vaccine was "the desire to protect one's patients," Bryant says. At eight hospitals, the influenza vaccination rate was greater than 50% in all high-risk units. At one hospital, the PICU and oncology units had a 100% vaccination rate. Still, many health care workers even in high-risk units are not getting the vaccine. "I think there is a disconnect," she adds. "Many health care workers don't perceive that they can become vectors of influenza and that there can be real consequences for real children [at pediatric hospitals]."

The study was a project of the Pediatric Prevention Network, a collaboration between the National Association for Children's Hospitals and Related Institutions and the Centers for Disease Control and Prevention.

To boost vaccination, the network sent out educational materials and promotional posters. They also sent letters to hospital administrators stressing the importance of influenza vaccination. They asked hospitals about how they conducted their influenza campaigns. "We found almost universally [that] hospitals provided free vaccine to employees," Bryant says. "That doesn't seem to matter. Employees don't take advantage of it even though it's free."

Why don't health care workers get the vaccine? The reasons differed by unit. Employees in the NICU were most likely to say they were worried that the vaccine actually would cause influenza. (The vaccine uses an inactivated virus and cannot cause disease.) They also were more likely to claim they had an allergy to the vaccine. In the PICU, workers reported a fear of injection and of side effects. Oncology employees who were not vaccinated claimed that they never get the flu, anyway.

"What that suggested to us is that you may need to have focused campaigns within a hospital," Bryant says. "You need to know the concerns of the group. The approach that gets your NICU immunized may not work two floors up when you talk to the PICU health care workers."

Just correcting misperceptions and providing more education won't be enough, she cautions. Even at Kosair, there is a disparity in vaccination rates, which are about 90% in the PICU and 80% in oncology, but only about 50% in the NICU.

"I am not sure that education will ever be enough," she adds. "Our own experience is a good example of that. In the units where we have had great success in getting people immunized, the support has been top down. [The message is,] 'You work in this unit with high-risk kids, we think it's important that you get the vaccine.'" ■

'Readiness is more than vaccination'

Smallpox planning reaches new stage

A year after states began drafting smallpox vaccination plans, preparedness is moving into a new phase with a new challenge: How do you sustain those efforts?

While still encouraging vaccination, the Centers for Disease Control and Prevention (CDC) and state health officials are asking hospitals to bolster

CE questions

17. As health officials remain alert for the reemergence of SARS, what epidemiological pattern does CDC advise hospitals to look for?
 - A. patients with symptoms that don't match any other condition
 - B. a cluster of two or more health care workers hospitalized with pneumonia that has no alternative diagnosis
 - C. a cluster of five or more health care workers hospitalized with pneumonia who work in the same unit
 - D. patients with respiratory symptoms and a high fever
18. When the Joint Commission on Accreditation of Healthcare Facilities includes hand hygiene in its surveys, it will primarily look for:
 - A. policies that state the hospital's position on hand hygiene
 - B. the proximity of hand hygiene stations to patient rooms
 - C. data on nosocomial infections
 - D. observance of hand hygiene as employees care for patients
19. In Washington state, what is the main message from the business coalition that seeks to repeal the ergonomics rule through a ballot initiative?
 - A. The ergonomics rule will hurt businesses and kill jobs.
 - B. Ergonomics doesn't work.
 - C. Ergonomics rules should be nationwide.
 - D. Ergonomics is too hard to implement.
20. In a good safety culture, according to Craig Clapper of Performance Improvement International in San Clemente, CA, what is a "red rule"?
 - A. a rule that relates to blood and body fluids
 - B. a rule that, when broken, leads to serious injury
 - C. a rule that staff should follow in all cases
 - D. a rule that is written in red ink

Answer Key: 17. B; 18. D; 19. A; 20. C

education programs and communications capabilities. They also will need systems to track vaccinated employees. Five years after their vaccination, those employees will need a booster to remain fully protected against smallpox, the CDC says.

Just 235 hospitals nationwide have vaccinated a response team of at least 25 employees, and just 24,000 health care workers received the vaccine. But with or without a team, hospitals need

a preparedness plan. If smallpox occurs anywhere in the world, or in the nation, who would be vaccinated first at the hospital?

Which employees would conduct the vaccinations? What is the hospital doing to heighten awareness of all bioterrorism agents and improve the likelihood of early identification?

"Readiness is more than just vaccination," says **Lynn Steele**, MS, CIC, senior adviser in the CDC's Office of Terrorism Preparedness and Emergency Response. It is more than just an algorithm showing the difference between smallpox and chicken pox, although the CDC provides detailed information on such issues on its web site. (See: www.bt.cdc.gov/agent/smallpox/diagnosis/riskalgorithm/index.asp for a form to evaluate rash illness.)

"We would want [health care workers] to be trained to vaccinate others," says **Donna Knutson**, MSED, senior adviser in the terrorism office.

"We would want them to be trained in the appropriate isolation and infection control procedures. We would want the [members of the] team to be trained so they understand their role in the overall response plan," she explains.

Education has to match those needs, and may be incorporated into annual infection control training, Steele says. "It's not just a one time shot to begin to prepare people to begin thinking about the possibility of smallpox. We have to think about educational strategies that are more ongoing and repetitive."

CDC officials acknowledge they are disappointed by the response to the smallpox vaccination program. Some hospitals decided that the risks of side effects from the vaccine outweighed the benefits of vaccination — with the risks of an actual smallpox event impossible to determine. Those hospitals would need to be prepared to move swiftly to vaccinate employees if a smallpox event occurs.

"Some facilities have a list of people who would volunteer to be a part of a program if indeed there would be an event," Steele adds. "They've done everything to prepare people except put the vaccine in their arm."

That is the approach taken by Baystate Health System in Springfield, MA. **James Garb**, MD,

director of occupational health and safety, is developing a post-event vaccination plan, including training potential vaccinators. "We need to identify an appropriate location and identify what we'd need for supplies. We should do some training and at some point enact a drill."

He has identified volunteers for a response team but has not initiated pre-event vaccination. "The chance of us seeing a [smallpox] patient before someone else in the world is pretty small. It could happen, but a more likely scenario is that we would have a case of smallpox somewhere else and the risk-benefit equation would be drastically altered. We'd need to vaccinate people."

Nonetheless, the Massachusetts Department of Public Health is trying to promote more pre-event vaccination. As of early September, only 136 health care workers had been vaccinated in the Massachusetts, according to CDC data.

"If you don't have vaccinated people, you're always stuck with the need to have people expose themselves to smallpox and the risk of dying from it. That's the bottom line for me," says state epidemiologist **Al DeMaria**, MD, director for communicable disease control and a member of the Healthcare Infection Control Advisory Committee, a federal panel that advises CDC.

"We can't really know if [smallpox] exists or not. We can't know until it happens," he says. "If it's not somebody who's already vaccinated, it's going to be someone who depends on personal protective equipment." While post-exposure vaccination can prevent infection, it isn't completely protective. "People can still get smallpox and transmit smallpox after exposure [and vaccination]." Furthermore, vaccinees won't know if they had a take until about seven days after vaccination, he says.

Meanwhile, hospitals need a way to keep track of their vaccinated employees, which may include some employees who were vaccinated as a part of the military program. The vaccine monitoring system used to track and report adverse events may be adapted as a tracking tool, DeMaria says.

"It's going to be the hospital's responsibility to know who's vaccinated and to replace people who leave or retire with other vaccinated people," he says. ■

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United States Postal Service
Statement of Ownership, Management, and Circulation

1. Publication Title Hospital Employee Health		2. Publication No. 0 7 4 4 - 6 4 7 0		3. Filing Date 10/1/03	
4. Issue Frequency Monthly		5. Number of Issues Published Annually 12		6. Annual Subscription Price \$449.00	
7. Complete Mailing Address of Known Office of Publication (Not Printer) (Street, city, county, state, and ZIP+4) 3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, Fulton County, GA 30305				Contact Person Robin Salet Telephone 404/262-5489	
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not Printer) 3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, GA 30305					
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do Not Leave Blank)					
Publisher (Name and Complete Mailing Address) Brenda Mooney, 3525 Piedmont Road, Bldg. 6, Ste. 400, Atlanta, GA 30305					
Editor (Name and Complete Mailing Address) Coles McKagen, same as above					
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10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual. If the publication is published by a nonprofit organization, give its name and address.)					
Full Name		Complete Mailing Address			
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12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates.) (Check one) <input type="checkbox"/> The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: <input type="checkbox"/> Has Not Changed During Preceding 12 Months <input type="checkbox"/> Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)					
PS Form 3526, September 1998 See instructions on Reverse					
13. Publication Name Hospital Employee Health		14. Issue Date for Circulation Data Below October 2003			
15. Extent and Nature of Circulation		Average No. of Copies Each Issue During Preceding 12 Months		Actual No. Copies of Single Issue Published Nearest to Filing Date	
a. Total No. Copies (Net Press Run)		1831		2071	
b. Paid and/or Requested Circulation	(1) Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541. (Include advertiser's proof and exchange copies)	1424		1434	
	(2) Paid In-County Subscriptions (include advertiser's proof and exchange copies)	9		7	
	(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	6		5	
	(4) Other Classes Mailed Through the USPS	38		31	
c. Total Paid and/or Requested Circulation (Sum of 15b(1) and 15b(2))		1477		1477	
d. Free Distribution by Mail (Samples, Complimentary and Other Free)	(1) Outside-County as Stated on Form 3541	24		23	
	(2) In-County as Stated on Form 3541	2		2	
	(3) Other Classes Mailed Through the USPS	0		0	
e. Free Distribution Outside the Mail (Carriers or Other Means)		50		325	
f. Total Free Distribution (Sum of 15d and 15e)		76		350	
g. Total Distribution (Sum of 15c and 15f)		1553		1827	
h. Copies Not Distributed		278		244	
i. Total (Sum of 15g and h)		1831		2071	
Percent Paid and/or Requested Circulation (15c divided by 15g times 100)		95		81	
16. Publication of Statement of Ownership Publication required. Will be printed in the November 2003 issue of this publication. <input type="checkbox"/> Publication not required.					
17. Signature and Title of Editor, Publisher, Business Manager, or Owner Brenda L. Mooney Publisher				Date 9/30/03	
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- cite practical solutions to problems associated with the issue, based on overall expert guidelines from the Centers for Disease Control and Prevention, the National Institute for Occupational Safety and Health, the U.S. Occupational Safety and Health Administration, or other authorities, or based on independent recommendations from clinicians at individual institutions. ■