HOSPITAL EMPLOYEE HEALTH

THE PRACTICAL GUIDE TO KEEPING HEALTH CARE WORKERS HEALTHY

AUGUST 2017 Vol. 36, No. 8; p. 85-96

INSIDE

AHC Media
A RELIAS LEARNING COMPANY

NIOSH Network Provides Local Solutions to a National Problem

Occ injury, exposure tracking system aiming for 300 hospitals

By Gary Evans, Medical Writer

The federal Occupational Health Safety Network (OHSN) is expanding exponentially, with the number of hospitals submitting healthcare worker injury and exposure data expected to climb to 300 in 2018. With the recent addition of two new reporting categories for needlesticks and blood exposures, a national reporting system that touts local interventions is on the horizon.

"People who believe as we do see occupational injuries as preventable — they should be at zero," says **Ahmed Gomaa**, MD, ScD, MSPH, a medical officer at OHSN. "There is a reason for every injury that happens. This is a continuous process as people retire and the next generation of physicians and nurses come in — they need to be educated and trained. We are trying to help them determine where things are happening and how, so they can fix it. We can help them in terms of tools to do that and to measure the impact."

> "PEOPLE WHO BELIEVE AS WE DO SEE OCCUPATIONAL INJURIES AS PREVENTABLE — THEY SHOULD BE AT ZERO."

The OHSN was created by the National Institute for Occupational Safety and Health (NIOSH), a branch of the CDC that is openly urging more hospitals to join the expanding network to bolster the power of its cumulative data.

"This is voluntary, so the more people we have, the more injuries we can prevent," he says. "[Occupational health] is complementary to patient safety. Worker safety is part of hospital safety; we cannot do one without

Financial Disclosure: Medical Writer **Gary Evans**, Editor **Jill Drachenberg**, Editor **Dana Spector**, AHC Media Editorial Group Manager **Terrey L. Hatcher,** and Nurse Planner **Kay Ball** report no consultant, stockholder, speaker's bureau, research, or other financial relationships with companies having ties to this field of study.

HOSPITAL EMPLOYEE HEALTH

Hospital Employee Health®,
ISSN 0744-6470, is published monthly by
AHC Media, a Relias Learning company
111 Corning Road, Suite 250
Cary, NC 27518
Periodicals Postage Paid at Atlanta, GA 30304 and at additional mailing offices.

POSTMASTER: Send address changes to:
Hospital Employee Health®
P.O. Box 74008694
Chicago, IL 60674-8694

SUBSCRIBER INFORMATION:
Customer Service: (800) 688-2421.
Customer.Service@AHCMedia.com.
AHCMedia.com
Hours of operation: 8:30 a.m.- 6 p.m. Monday-Thursday; 8:30 a.m.-4:30 p.m. Friday, EST.

SUBSCRIPTION PRICES:
U.S.A., Print: 1 year (12 issues) with free Nursing Contact Hours, $499. Add $19.99 for shipping & handling. Online only, single user: 1 year with free Nursing Contact Hours, $449. Outside U.S., add $30 per year, total prepaid in U.S. funds.

MULTIPLE COPIES: Discounts are available for group subscriptions, multiple copies, site licenses, or electronic distribution. For pricing information, please contact our Group Account Managers at Groups@AHCMedia.com or (866) 213-0844.

ACCREDITATION: Relias Learning, LLC, is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. Contact hours [1.25] will be awarded to participants who meet the criteria for successful completion. California Board of Registered Nursing, Provider CEP#13791. It is in effect for 36 months from the date of publication.

Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. Clinical, legal, tax, and other comments are offered for general guidance only; professional counsel should be sought for specific situations.

MEDICAL WRITER: Gary Evans
EDITOR: Jill Drachenberg
EDITOR: Dana Spector
AHC MEDIA EDITORIAL GROUP MANAGER: Terrey L. Hatcher
SENIOR ACCREDITATIONS OFFICER: Lee Landenberger

EDITORIAL QUESTIONS:
For questions or comments, call **Gary Evans** at (706) 424-3915.

the other. A protected worker is a magnet for patient safety. It improves the reputation of the hospital because they take care of their workers and their patients."

Think Global, Act Local

While the big-picture view of aggregate occupational health data is a clear benefit of the system, OHSN officials say the real solutions occur at the local level.

"They can see an aggregate rate of the whole system," Gomaa says. "We don't do any statistical analysis or comparisons of hospital to hospital. That is not our goal. Our goal is to give an [individual] hospital data in a way that it is actionable. We offer them our prevention tools. If you have a problem with violence, there is training on how to prevent that. Basically, these are courses and tips you can present and then see if you can maintain the effect of, for example, needleless IV systems or other safety devices. It depends on your own data."

The OHSN was launched in 2013 and officials have been testing the concept, the methodology, and the direct interaction with the hospitals, he notes.

"They told us they really don't have a system to give them feedback on a hospital level," he says. "You can get national reports that show general U.S. trends, but few details on the root causes at [individual] hospitals. So, there is nothing [to guide] specific actions. We came up with a system which is basically designed [to protect] the front-line healthcare workers in hospitals. We feed this [data] back to the people who are responsible for preventing hospital injuries."

The OHSN has modules for injuries related to patient handling, slips, trips, and falls, workplace violence, and, most recently, sharps injuries and blood and body fluid exposures.

"Originally, we launched three modules — injury from patient handling; injuries from slips, trips and falls; and injury from violent acts against healthcare workers — whether it is physical or verbal," Gomaa says. "In March of this year, we launched two new modules. One is on needlesticks and sharps injuries, and the second one is blood and body fluid exposures. This has been received very well because those are the most feared exposures among healthcare workers. It is gaining a lot of traction and people want to join and participate in these new modules."

The U.S. is one of the few industrialized countries lacking a nationally standardized sharps injury and blood and body fluids surveillance system, he says. Given its continuing expansion, the OHSN system could complement, or even eventually partner with, the existing needlestick tracking systems. These include the EPINet program at the International Safety Center, which was involved in developing the new OHSN needlestick and exposure modules.

"[We] were thrilled to work with NIOSH on the development of OHSN's new modules," says **Amber Hogan Mitchell**, DrPH, MPH, director of the International Safety Center. "Since OHSN's newest modules are modeled after EPINet, current and future EPINet users can simply upload their existing data to OHSN if they so wish. We applaud NIOSH for joining us in capturing bloodborne and infectious disease incident data so that we can work together to create an accurate

national picture of ongoing risk. With HIV and HCV infection more prevalent than ever, it is critical that we measure exposures being sustained by healthcare personnel so that we can build programs, controls, and systems to prevent them."

The other major needlestick surveillance system is the annual EXPO-S.T.O.P. survey conducted by the Association of Occupational Health Professionals in Healthcare (AOHP). *(For more information on the survey, see the July 2017 issue of* Hospital Employee Health*.)*

"Our goal is improved safety for all healthcare workers," the AOHP told *HEH* in an email statement. "If NIOSH or other surveys such as EPINet can ramp up and represent data for the entire U.S., have 'benchmarking' details available to all, and present prevention strategies, then AOHP would consider partnering with one of those other studies."

Report Data on Hand

In addition to using standard definitions, the OHSN system compiles injury data employee health professionals already are collecting for OSHA standards and requirements.

"That's one of the benefits of our system," Gomaa says. "We are not really asking them to collect any new data. OSHA requires hospitals to collect [much of] this data. Some hospitals keep this data as hard [print] copy, but it can be computerized with our system."

The data can be broken down by unit and the healthcare activity that was underway at the time of the injury, or by the reportable incident. The OHSN data are uploaded by the healthcare facility monthly or quarterly. After that, the feedback is timely, with reports coming back to the hospital within a week to 10 days, Gomaa says. In addition, an archive of prior data is available to assess problems and progress over time. Hospitals can select a denominator for rate calculation, using a measure of monthly admission, facility bed size, or the number of full-time employees, he explains.

> "IT'S AN ONGOING PROCESS. YOU HAVE TO LOOK AT THE DATA AND THE DISTRIBUTION OF [THE INJURIES], DO SOMETHING ABOUT IT ACCORDINGLY, AND THEN MEASURE THE IMPACT."

"If you want to see injuries among nurses in ICUs, you can click on the menu and decide how to display it — month by month, or year by year," he says. "You can look at [the data] by department or by risk factors — say, a patient is being moved from a stretcher to a bed, or you were doing a procedure, or a patient gets violent. All this data comes to us in a standard format and we give it back to them electronically on a secure website. It is basically an interaction between us and them. Everybody sees their own data and they cannot see anyone else's. They can sit at their desk, look at their data, and cut it and slice it any way they want. It gives them local knowledge about what is going on, and we help them come up with solutions."

That is the key difference between the OHSN and existing surveillance systems for occupational injuries, as the network reports the data back to the individual reporting hospitals in a manner that highlights areas of concern and the need for intervention.

"The first thing we do is connect the health outcome with actionable prevention [approaches]," he says. "If this injury was due to patient handling, that is the first step — you connect the two. If you are moving a patient from point A to point B and get injured, you should know what to do to prevent it. When you moved the patient from a bed to a stretcher, did you use safe lifting equipment or a lift team?"

The OHSN program will help hospitals pinpoint such problems, and try to provide insight in terms of root causes and interventions, he says.

"For example, right now we are seeing a lot of patient handling injuries in radiology," Gomaa says. "That did not use to happen, but if a radiology tech is injured you may need some lifting equipment there. They may not expect that to happen [in that unit] — it is not in the ICU. It is not on the floor. So, they can look at our guide and analyze the data. If they come up with a solution, they can objectively measure when the rates went down. It's an ongoing process. You have to look at the data and the distribution of [the injuries], do something about it accordingly, and then measure the impact. It is not just data or a piece of equipment — it is a safety culture issue." ■

AOHP Not in Favor of OSHA Violence Regulation as Proposed

The association wants more settings covered if standard moves forward

While emphasizing its support for violence prevention programs to protect healthcare workers, one of the nation's leading occupational health groups says it does not support promulgation of a new standard by OSHA as currently outlined, *Hospital Employee Health* has learned.

The Association of Occupational Health Professionals in Healthcare (AOHP) favors OSHA enforcement of workplace violence (WPV) programs through OSHA's general duty clause. AOHP also supports accrediting organizations, such as The Joint Commission (TJC), continuing to assess violence prevention programs through surveys.

"AOHP understands OSHA pursing a proposed WPV standard," the association told *HEH*. "However, AOHP had some concern about the proposed standard, and shared these in the Request for Information earlier this year. Due to the difficult nature of developing a comprehensive WPV standard, AOHP feels at the present time that OSHA's general duty clause enables WPV enforcement."

AOHP emphasized that it has been concerned about the issue and supports programs to prevent violent threats in healthcare.

"In [our] written comments, AOHP expressed concern that the proposed standard would not address all types and all healthcare settings where WPV could occur if the standard were to move forward. AOHP would like to see these areas addressed as well," the association stated.

AOHP also underscored that the TJC survey process addresses WPV in its approximately 21,000 accredited healthcare organizations.

"Although TJC does not have a specific WPV prevention standard, TJC has recognized the significance of this issue for all individuals involved in healthcare and has taken action to increase the safety of patients, staff, and visitors," the AOHP told *HEH*.

"DUE TO THE DIFFICULT NATURE OF DEVELOPING A COMPREHENSIVE WPV STANDARD, AOHP FEELS AT THE PRESENT TIME THAT OSHA'S GENERAL DUTY CLAUSE ENABLES WPV ENFORCEMENT."

"The Environment of Care standard requires a safe environment for patients, staff, and visitors, and requires a safety assessment that includes the identification of facility risks. The organization is to create applicable policies, implement the security program, assess for effectiveness, and adjust the strategy if needed."

Likewise, any worker safety requirements of another controlling authority, like a state entity, must be followed, the AOHP noted.

"The [TJC] survey process would evaluate the assessment process and, through tracer activities, validate implementation in accordance with the established policy," the AOHP said. "A review of the safety assessment is required at least annually to identify goals and objectives, and to recognize changes that have occurred in the environment. Workplace violence is also often addressed through TJC Emergency Preparedness standard with the use of the Hazard Vulnerability Analysis process."

Other AOHP positions in its 2017-2019 position paper[1] include plans to collaborate with NIOSH on two initiatives that directly affect the health and safety of healthcare workers. One is the Total Worker Health initiative, which is defined as "policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being." The other is the NORA Healthcare and Social Assistance Sector Council, which scientifically addresses healthcare hazards and transfers research findings to practice.

"[The] documents and results from these initiatives will continue to be utilized by AOHP and its members to create a safe working environment for staff, reduce injuries, and ultimately benefit the patients entrusted to HCWs for care," the association stated.

AOHP supports efforts to ensure

a safer healthcare environment for both the patient and the employee, including utilizing lift/assist devices as the primary method for the prevention of musculoskeletal injuries, the paper states.

"More than 40 years of instructing HCWs on proper body mechanics has done little to impact injury statistics," the AOHP said in the policy paper. "Back injuries and other musculoskeletal disorders related to patient handling are the leading cause of workplace disability for nurses and other direct patient care providers."

For patient transfers, lifts, and repositioning, mechanical equipment must be provided by the facility and used by the caregivers.

"AOHP advocates for regulations, legislation, education, training, research, and prevention activities as related to safer patient handling activities and methodologies," the association stated. "AOHP will work to influence both state and national legislation as it relates to safe patient handling."

REFERENCE

1. AOHP. AOHP 2017-2019 Public Policy Statement. June 2017: http://bit.ly/2s5vsQl.

Profiles in Wellness: Tom Jackson Makes a Difference

'I've always had, philosophically, a more holistic view of health'

When an employee reports an injury or illness, the astute employee health professional is well aware that many other life stresses and work pressures may be simmering just beneath the surface.

"I've always had, philosophically, a more holistic view of health. Things are connected," says **Thomas E. Jackson**, MSN, FNP-BC, director of employee health and wellness at East Tennessee Children's Hospital in Knoxville. "I remember one of my professors said if somebody comes in for a sore throat — there are thousands of people out there with a sore throat today — is that what motivated them to come in for care?"

As a result, Jackson has come by a compassionate curiosity which he recently described in an interview with *Hospital Employee Health*.

"Lots of times when I am seeing an employee about a minor thing, and after we have addressed that, I ask, 'How is everything else going in your life?'" he says. "You find out they have a spouse with cancer or a parent dying, a child that is having problems, or they are going through a divorce. So you sort of tap into that. 'How can we help you care for yourself?' That is a kind of a multidimensional opportunity."

HEH: Can you tell us a little about your employee wellness and occupational health program?

Jackson: I am a family nurse practitioner and have been the director of employee health and wellness here at Children's Hospital in Knoxville for the past 10 years. It's one of the things where, for years, we would see hospital employees have a lot of knowledge in terms of how to maintain health and teach health education, and take care of their families and everything else. Unfortunately, knowledge doesn't seem to be enough when you are trying to make personal behavior changes and to take the time to tend to your own needs. Here in our hospital, we have close to 1,400 employees. When I came here, we as a staff sat down and said, "Is there a vision — a way we can help our employees be healthier?" That is the business we are in — healthcare.

HEH: What approach did you end up with?

Jackson: We set up a clinic model, where we have an employee health and wellness clinic which is open to all employees at no charge. So, we see employees for all kinds of reasons — primary care, or as a "minute clinic" for acute care issues like sore throat, UTIs, cough, sore shoulder, whatever. In developing that model, it gave us an opportunity to get to know our employees a little better and establish some trust. When we originally developed the model, it was made very clear to our CEO and administration that when they came into the clinic, that was confidential information. That was kind of sacred territory. If we didn't have that, [we wouldn't] have trust. That was the foundation of how we started, and we opened it up as we got to know our employees. They would come for something and we may notice they are a smoker. We say, "Look, if you are interested, we would love to help try to address that."

HEH: What kind of problems are you seeing in healthcare workers?

Jackson: People come in with blood pressure, blood glucose issues

— the kinds of things that we believe lead to avoidable or preventable illness. With our benefits group, we looked at what is causing the most pain in people's lives, and also the most cost to the organization. When you look at a lot of these issues — blood pressure, heart disease, high cholesterol, blood glucose problems — those are the things that lead to enormous costs — not only in pain, but also in dollars. We reviewed different third-party organizations and brought in a group. They come in once a year and do a full metabolic panel to give the [workers] feedback. Where is blood pressure, cholesterol, blood sugar?

HEH: How does your department use this information?

Jackson: We have tried to take a more results-oriented approach to this. I've been in other organizations where you have stair-step or pedometer competitions. The way I personally look at it is you can have physical activities and blitz people with all kinds of information, which does help some. But in general, if you really focus on the results, the numbers that we know scientifically lead toward disease — blood pressure, blood glucose and lipids — you can give people a snapshot of [their numbers]. It gives them a "wake-up" opportunity, and it gives us the opportunity to engage with them and keep them from falling off that cliff.

HEH: It seems like you have gone to more of a primary care model instead of traditional occupational health.

Jackson: That's exactly right — we decided to do that. I've been a nurse practitioner for about 30 years and I have worked in other organizations with unionized environments. If you are only in an occ health model, there is not the intimacy of knowing people's lives beyond the work injury. We still treat work injuries. In the state of Tennessee, if you have a work injury the state gives you the right to see a choice of three physicians, and we make that available to employees. But, we treat about 90% of our work injuries in-house through our clinic. They are resolved and people don't use the outside model. We do pre-employment physicals, which are kind of an occ health plug-in. We do work injury treatment, but over and beyond that, we plugged in that minor acute illness primary care piece. We don't treat blood pressure and blood glucose and those kinds of things requiring medication treatment; we refer that to their primary care providers. By offering the doc-in-the-box model, it's a win-win — we catch [problems] earlier, they get better quicker, and they don't miss work.

> "IF YOU ARE ONLY IN AN OCC HEALTH MODEL, THERE IS NOT THE INTIMACY OF KNOWING PEOPLE'S LIVES BEYOND THE WORK INJURY."

HEH: How are you faring on the age-old problem of needlesticks?

Jackson: Needlesticks and safety are another area of our heightened awareness and concern. In our organization, we have a program called Destination Zero. Our goal is to have zero needlesticks and work injuries. It is a lofty goal, but it reminds us to protect ourselves and protect each other. Be more mindful. When you are out there, every time there is a sharp in your hand or someone else's hand, pay attention. We don't want you to have a sharps injury, ever. We have safety coaches throughout the organization now that are trying to help raise awareness so people are paying more attention. We see fewer needlesticks. We haven't achieved zero, but we are paying attention to it.

HEH: Safe patient handling would not seem to be a major issue in a pediatric hospital.

Jackson: Being a children's hospital, we are at a bit of an advantage on [that issue] compared to the adult institutions. Let's face it, obesity illness is an epidemic. We've got a lot of NICU babies, infants, and small children, but we are seeing diabetes and obesity impact children in our culture now like never before. So, we do have larger, heavier children now.

We had a bariatric support team that went throughout the organization to make sure we have hover mats and lifting assist devices that help redistribute weight and help move larger children in a safe way for both the patient and the hospital employees. We have very few back injuries. I often will see more back injuries in staff that are pushing or pulling than we see from moving bodies. But it is still a challenge and it is something we are constantly looking out.

Our safety coaches preplan in case we admit an [obese patient]. There are times we have nurses come here from an adult institution that are changing career paths. They tell me they are seeing, every day, multiple 300-pound, 400-pound patients. I tell them, "Don't assume that our hospital is full of NICU babies." We still have some of those challenges. ■

WHO Ready to Use Ebola Vaccine in Congo

Outbreak appears to be fading, but what is next for HCWs?

The World Health Organization (WHO) is poised to begin vaccinating healthcare workers with an experimental new Ebola vaccine, but continues to hold off as an outbreak in the Democratic Republic of the Congo appeared to be dissipating as this report was filed.

As of June 19, 2017, there have been five confirmed and three probable cases of Ebola in the Congo, the WHO reported.[1] Additionally, there have been 99 suspected cases reported that tested negative on lab follow-up. The last confirmed case was diagnosed on May 17, 2017. Of the eight confirmed and probable cases, four people survived. The confirmed and probable cases were reported from Nambwa (four confirmed and two probable), Ngayi (one probable), and Mabongo (one confirmed).

"Data modeling suggests that the risk of further cases is currently low but not negligible, and decreases with each day without new confirmed/probable cases," the WHO reported. "As of the reporting date, 97% of simulated scenarios predict no further cases in the next 30 days."

The cluster of cases and deaths were first reported as an unidentified illness in late April 2017. The affected area is remote and hard to reach, with limited communication and transport infrastructure, the WHO noted. Fruit bats are thought to be a natural reservoir for Ebola, and were implicated as the source of the 2014 outbreak.

Though Ebola typically erupts in violent outbreaks and subsides, that outbreak forever altered perceptions of the virus as it devastated West Africa over a prolonged period. Some 11,000 people died before it was over, and the U.S. and other nations saw cases via travelers and returning healthcare workers. According to the WHO, from Jan. 1, 2014, to March 31, 2015, there were 815 confirmed and probable cases of Ebola infection in healthcare workers in Africa. Among the health workers for whom final outcome is known, two-thirds of those infected died, the WHO reports.[2]

A highly successful vaccine was developed and trialed near the end of the outbreak, and the WHO has thousands of doses if the need arises.[3] In a tactic similar to the one used to eradicate smallpox, WHO is considering vaccinating a "ring" of case contacts and people around the affected area.

"The protocol for a possible ring vaccination has been formally approved by the national regulatory authority and Ethics Review Board of the Democratic Republic of the Congo," WHO reports.[4] "The government [of Congo] with support of WHO and other partners are working on detailed planning and readiness to offer access to the … experimental/investigational vaccine, within the expanded access framework, with informed consent and in compliance with good clinical practice. Planning and readiness should be completed urgently to be able to rapidly initiate ring vaccination should an Ebola laboratory-confirmed case be identified outside already-defined chains of transmission. The vaccine would be offered to contacts and contacts of contacts of a confirmed Ebola case, including healthcare workers and field laboratory workers."

A 100-year Flood

With a vaccine now available and the hard lessons learned from the 2014 outbreak, an infectious disease expert and PPE trainer thinks the hemorrhagic virus will be contained.

"I respect Ebola as a virus, but what we saw in 2014 was unlike anything we have ever seen with Ebola. It was almost like a 100-year flood," says **Sean Kaufman**, MPH, CHES, CPH, CIC, MBTI, who is directing a new high-containment infectious disease training program at Southern Research in Birmingham, AL. "There will be outbreaks. This is normal, but these outbreaks are usually contained very easily because of the nature of the virus. I am more concerned with [the next] influenza pandemic, where you are looking at very high levels of morbidity and mortality, unlike anything we have seen."

Indeed, the general perception that the 2009 H1N1 influenza A pandemic was a relatively mild event could allow a complacency to set in. Yet, one study[5] estimated that between 151,700 and 575,400 people died worldwide in the 2009 pandemic. Though many deaths and certainly infections went uncounted, some experts estimate that as many as 1 billion people acquired the virus as it circled the globe. The mortality rate was low by pandemic standards, but there were similar features of past outbreaks such as infection in young,

healthy populations. A more virulent pandemic strain resulting after another "antigenic shift" in mutating flu viruses would imperil front-line healthcare workers until a vaccine was developed. Healthcare workers have been among the victims of large respiratory outbreaks of SARS in 2003 and still-percolating MERS.

These cases show healthcare workers are left vulnerable by infection control measures primarily designed to protect patients, emphasizes Kaufman, who advocates a "clinical containment" approach that combines infection control and biosafety techniques that have worked so effectively in labs.

"We had seven Ebola cases come to the U.S. and two nurses got sick," says. "We have never had a lab worker in the U.S. get sick with Ebola, even though we have worked with it for many years."

Kaufman — who trained workers in Africa during the 2014 outbreak and oversaw infection control measures for the first two Ebola patients admitted to Emory University in Atlanta — controversially criticized the CDC for its initial recommendations to protect workers.[6]

"The CDC had put out a SOP for healthcare workers that was inappropriate," Kaufman tells *HEH*. "I reached out to CDC while I was in Liberia to tell them, based on what I was seeing, the SOP was inappropriate: 'This is not something healthcare workers should do — you are going to get people sick.' The long story short is that I was right."

Double Down on Gloves

The CDC guidelines were in flux when the nurses in Dallas were infected, but one subsequent change was a recommendation for wearing two pairs of gloves instead of one. Press coverage highlighted this change and Kaufman's concerns, and subsequent research suggests the inner pair of gloves may be a critical addition.

A researcher presenting a study on PPE removal recently in Portland at the annual meeting of the Association for Professionals in Infection Control and Epidemiology said inner gloves were contaminated in some experiments using surrogate markers for Ebola.

"That suggests that inner gloves are doing what they are supposed to do," said **Lisa Casanova**, PhD, an assistant professor at Georgia State University in Atlanta. "In this process, you take off your outer gloves, and then it is the inner gloves that are being used to touch most of your PPE items as you remove it. So, really, inner gloves are becoming contaminated instead of your bare hands, but that does reinforce the idea that we have to be careful about how we remove the inner gloves."

HEH recently asked the CDC for a response to Kaufmann's charges that initial PPE protocol was inadequate for Ebola, and received the following response via email from **Michael Bell**, MD, a medical epidemiologist in the CDC's Division of Healthcare Quality Promotion:

"The experience with Ebola virus infection in the United States and abroad demonstrated the urgent need for infection control training for all staff in healthcare facilities, and the importance of careful assessment and triage systems," Bell said in the statement. "In the United States and elsewhere, many different types and combinations of protective equipment have been used safely and successfully, but they all require consistent adherence to correct use, including removal and disposal, by all staff members."

Even if the current outbreak of Ebola is contained, it is good to revisit these issues and evaluate the response in light of future emerging pathogens, Casanova says.

"I think it is important to instill these [Ebola] lessons because we never know when we are going to need this level of preparedness again," she said. "Also, a lot of the lessons we are learning about PPE, I think, are transferable to the ordinary healthcare setting. Also, the approach of understanding how well we are doing [with PPE] is transferable." ■

REFERENCES

1. WHO. Ebola Virus Disease. Democratic Republic of the Congo. *External Situation Report* 25. 19 June 2017: http://bit.ly/2rUUEIZ.
2. WHO. Health worker Ebola infections in Guinea, Liberia and Sierra Leone: A Preliminary Report. 21 May 2015: http://bit.ly/2sXRIwE.
3. Henao-Restrepo AM, Camacho A, Longini IM, et al. Efficacy and effectiveness of an rVSV-vectored vaccine in preventing Ebola virus disease: final results from the Guinea ring vaccination, open-label, cluster-randomised trial. *Lancet* 2017; 389:10068: 505–518.
4. WHO. Ebola Virus Disease. Democratic Republic of the Congo. *External Situation Report* 21. 05 June 2017: http://bit.ly/2s433O8.
5. Dawood FS, Luliano AD, Reed C, et al. Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study. *Lancet Infect Dis* 2012;12:9:687–695.
6. McNeil DG. Lax U.S. Guidelines on Ebola Led to Poor Hospital Training, Experts Say. *New York Times* Oct 15, 2014: http://nyti.ms/2tiDcm7.

Making the Business Case for Safe Patient Handling

Include worker injuries and patient safety issues

If you factor in the cascade of downstream consequences that affect workers, patients, and the hospital's bottom line, safe patient handling programs make both business sense and common sense, says **Dan Roberts**, RN, MBA, of the Association of Safe Patient Handling Professionals (ASPHP).

Making the business case for safe patient handling programs in a recent ASPHP webinar, Roberts outlined the evidence like an attorney delivering a closing argument. Employee health professionals can convince administration that safe patient handling equipment is a good investment if they show how an increasingly immobile patient population affects the physical health of the worker and the fiscal health of the hospital. In general, using equipment to enhance patient mobility offsets a variety of adverse health events and spares workers back and shoulder injuries that are at epidemic levels.

"Why shouldn't this be a priority right now in hospital spending?" he said. "This is a business case that there is a significant opportunity to improve clinical practice. That is at the center of this whole value proposition: improved clinical practice. Immobilized patients are not always moved safely and as frequently as they should be. This directly contributes to staff injuries and patient hospital-acquired conditions, impacting pay for performance and [other] quality measures."

Estimating that some 70% to 80% of patient care physical tasks are still performed manually, Roberts said that results in a high variability of care that is anathema to hospitals looking to increase reliability through standardization. In a typical 200-bed hospital, there may be some 30-35% of patients who need maximum assistance for movement, and another 30% needing moderate mobility assistance.

> "YOU HAVE TO CONVINCE ADMINISTRATION THAT CURRENT PRACTICE IS NOT MEETING THE NEEDS, AND AS A RESULT YOU HAVE A HUGE GAP OF VARIABILITY IN CARE PRACTICE."

"If you are getting patients out of bed twice a day or if you have to pull up patients eight times during a 12-hour shift, you can actually calculate out pretty close to about 3,000 physical tasks would be done in this particular [200-bed] hospital over a 24-hour period," Roberts said.

CMS Factors

Factor in reimbursement and penalties from the Centers for Medicare & Medicaid Services (CMS), including hospital-acquired conditions, total performance score, and drawing a red flag for readmissions within 30 days of discharge.

"What we are trying to do is align with hospital practice and specifically identify what measures the hospital requires in order to compete with some of those other spending projects," he said. "[If you can] argue strongly enough that you can significantly improve performance in the current year, you will definitely get the ear of administration. You have to convince administration that current practice — the present state — is not meeting the needs, and as a result you have a huge gap of variability in care practice."

Make sure that you have an "executive sponsor" within the hospital that understands what you are doing, why you are pursuing it, and agrees to support the business case for safe patient handling, Roberts said.

"Staff are getting hurt moving immobilized patients, which is still primarily [performed] manually across most of the U.S.," he said. "There are many patient adverse events that can be related to mobility, but some of the core ones are hospital-acquired pressure injuries, patient falls, falls with injuries, [and] pulmonary complications. All of these are measures that negatively impact the hospital as either sentinel events and/or directly as part of the penalty and reward programs of CMS."

Apply average national incidence rates for these adverse patient events

to your hospital, he recommends. "On average, if you took that population and incidence rate, you will see that 6% to 7% of those patients combined will experience one of those events," he says. "So, you end up with a fairly sizeable rate of patients affected by adverse events."

For example, early mobilization can reduce readmissions after discharge.

"There are data that show that patients that have early mobilization return to the hospital less, leave the hospital with less functional decline, and less physical deterioration," he said. "As a result, they have the ability to thrive and continue to improve post-discharge. That is much [better] than those patients who leave with significant functional decline. It makes logical sense that early mobilization can impact the hospital in a 30-day readmission reduction plan. Readmission is a huge area — probably over 50% to 60% of U.S. hospitals have 30-day readmission penalties."

Reduced Turnover Means Saving Money

In an average 200-bed hospital, the overall Medicare reimbursement total is in the range of $150-200 million, he added. "The losses could be $1-2 million based on early readmission penalties. And many of the patients that return to the hospital have mobility-related issues."

Patients that remain primarily immobile during hospitalization are at risk of healthcare-associated infections, particularly pneumonia.

"Pneumonia is a [high] impact area related to mobility — there is no question about that," Roberts said. "Patients who move regularly have significantly less propensity to develop pneumonia."

In terms of staff benefits, a safe patient handling program can clearly offset the original injury, the additional cost for replacement workers, lost work time, and restricted work time even after an employee returns. Moreover, having such programs can improve staff efficiency by reducing turnover, improving retention, and boosting new staff recruitment.

That last point had a surprisingly big effect on a safe patient handling program at Stanford University, where reduced staff turnover increased the value of the program by some $2.5 million.[1]

"IMMOBILITY IS USUALLY NOT MITIGATED UNLESS YOU EQUIP, ENABLE, AND EMPOWER STAFF TO EXECUTE THIS SAFELY. THAT IS THE IMPACT PART THAT WE ARE TRYING TO TAKE OWNERSHIP OF."

"Make sure in the business case you are measuring your direct cost for the workers' compensation," he said. "Many hospitals are self-insured to a catastrophic ceiling, so it is definitely coming out of cash flow when we have these types of injuries. What gets overlooked, and it is not so easy to capture, is all the lost work days and restricted work day costs."

An average 200-bed hospital will have an estimated 28 to 32 patient handling injuries per year, he estimates.

"That's just using the number of staff — probably in the range of about 500 to 600 full-time equivalents — with a mixture of titles: RN, nurses' aides, techs," Roberts said. "Those are the folks at the bedside that are experiencing this increased injury risk workload. Those injuries total about $700,000 in direct costs and lost work days and restricted work days combined. In the same-size hospitals, that is an estimated 13,000 and 14,000 patients, so applying an adverse incidence rate of the [aforementioned] adverse events, there would be 900 patients [with mobility-related complications]."

Direct cost related to employee injuries, plus the cost of adverse patient events, "could easily be in the $8 million range," Roberts says. He suggests building a spreadsheet report with an executive summary, breaking down the details within a dashboard to present to administration.

"With the limited or reduced reimbursements [now], managing complications and margins is much more important than it was 10 years ago in a more volume-based system," he said. "The concept is: 'We are not delivering standardized mobility to this population of patients. If we were, we could reduce the incidence rates [of these complications].' Immobility is usually not mitigated unless you equip, enable, and empower staff to execute this safely. That is the impact part that we are trying to take ownership of." ■

REFERENCE

1. Celona J. Making the business case for a safe patient handling and mobility program. *American Nurse Today* 2014;9:(9): http://bit.ly/2sRncWY.

The Epidemiology of Violence: Knowledge Is Power

Some may tend to think of violence as a random event that may not be preventable — and, indeed, it often manifests that way. However, as hospital violence has become a national issue and the subject of a possible federal regulation, researchers are showing that interventions using the basic epidemiologic principles of measurement and feedback can reduce unit-level violence by patients against healthcare workers.

To evaluate the effects of a randomized, controlled intervention on the incidence of patient-to-worker (Type II) violence and related injury in hospitals, researchers looked at 41 randomized units in seven hospitals. Of those, 21 received unit-level violence data to develop prevention strategies. As controls, 20 similar units received no feedback data.

"Six months post-intervention, incident rate ratios of violent events were significantly lower on intervention units compared with controls," the researchers reported.[1] "At 24 months, the risk for violence-related injury was lower on intervention units, compared with controls. This data-driven, work site-based intervention was effective in decreasing risks of patient-to-worker violence and related injury."

The intervention consisted of a 45-minute discussion with unit supervisors in which unit-specific data regarding violent incidents in their workplace were shared along with an array of improvement strategies. Unit supervisors then were directed to work with their teams to develop action plans to address violence, although they were free to adopt whatever solutions they deemed best.

"We had documented incidents, which gave us the ability to link up with the human resources database so we could get data on paid productive hours," says lead author **Judith Arnetz**, PhD, MPH, PT, a professor and associate chair for research in the department of family medicine at Michigan State University in East Lansing. "In other words, rather than counting numbers of incidents, we were calculating rates. We were applying epidemiological principles to the study of workplace violence."

> "SIX MONTHS POST-INTERVENTION, INCIDENT RATE RATIOS OF VIOLENT EVENTS WERE SIGNIFICANTLY LOWER ON INTERVENTION UNITS."

Specifically, the intervention consisted of a work site visit by one or two members of the research team and a stakeholder representative from the hospital system.

"The project was carried out in very close collaboration with security, human resources, nursing, quality and safety, and occupational health services, so we always had one stakeholder with us on the worksite visit," she says. "We met with a unit supervisor, and that person could bring one or two people with him or her."

When designing the intervention, Arnetz explains that it was a priority to make sure that unit operations were not disrupted to a large extent.

"We presented data directly from the database that would give the unit its rates of violence for the previous three-year period, and the rates were compared to rates for the entire hospital system," she says. "Then, we broke down the data into details about where the incidents occurred, who was involved — the bare facts."

At the conclusion of the visit, the researchers provided the unit supervisor with a checklist of possible intervention strategies that originally was developed by OSHA and adapted for the healthcare workplace by the study team.

"The unit supervisor and his or her team could look at environmental strategies, administrative strategies, or behavioral strategies," Arnetz says. "They were then supposed to come up with an action plan as to what, exactly, they were going to do."

The basic idea behind the intervention was that unit leaders would glean specific data from their own work setting that they could use to customize appropriate strategies for curbing or preventing workplace violence events. "They were not given any direction by the research team," Arnetz adds. "They were given the flexibility to come up with what they thought would work best and be most effective." ■

REFERENCE

1. Arnetz J, Hamblin L, Russell J, et al. Preventing patient-to-worker violence in hospitals: Outcome of a randomized controlled intervention. *J Occup Environ Med* 2017;59:18-27.

HOSPITAL EMPLOYEE HEALTH

CE INSTRUCTIONS

To earn credit for this activity, please follow these instructions:

1. Read and study the activity, using the provided references for further research.
2. Log on to AHCMedia.com, then select "My Account" to take a post-test.
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the test, a credit letter will be emailed to you instantly.
5. Twice yearly after the test, your browser will be directed to an activity evaluation form, which must be completed to receive your credit letter.

CE QUESTIONS

1. **The federal OHSN tracks which of the following?**

   a. Patient handling injuries
   b. Workplace violence
   c. Blood and body fluid exposures
   d. All of the above

2. **According to WHO, how many healthcare workers died from Ebola in West Africa from Jan. 1, 2014, to March 31, 2015?**

   a. 287
   b. 452
   c. 517
   d. 815

3. **WHO is considering vaccinating a "ring" of Ebola case contacts and people around the affected area. What disease was eradicated by this method?**

   a. Measles
   b. Plague
   c. Smallpox
   d. Polio

4. **Dan Roberts, RN, MBA, said an average 200-bed hospital will have an estimated 28 to 32 patient handling injuries per year.**

   a. True
   b. False

CE OBJECTIVES

After reading each issue of *Hospital Employee Health*, the nurse will be able to do the following:

1. Identify particular clinical, administrative, or regulatory issues related to the care of hospital employees;
2. Describe how the clinical, administrative and regulatory issues particular to the care of hospital employees affect health care workers, hospitals, or the healthcare industry at large;
3. Cite solutions to the problems faced in the care of hospital employees based on expert guidelines from relevant regulatory bodies, or the independent recommendations of other employee health professionals.