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INSIDE

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OSHA Seeks Comment on Violence Prevention Regulation

Landmark CA law to protect HCWs may be national template

By Gary Evans, Medical Writer

With recently finalized regulations in California serving as a possible template, OSHA is considering a national standard to protect healthcare workers, primarily from assaults by patients.

OSHA issued a request for information (RFI) and comment on Dec. 7, 2016, announcing that it is considering promulgating a federal standard to prevent workplace violence in healthcare settings.[1]

As previously reported in *Hospital Employee Health*, a Government Accountability Office (GAO) report[2] last year took OSHA to task for not doing more to prevent violence against healthcare workers. *(For more information, see the August 2016 issue of* HEH.*)* Efforts to use the OSHA General Duty Clause to enforce existing protections have been minimal and ineffective, the GAO found, pushing OSHA to the conclusion that a separate violence prevention standard may be needed. As a result, OSHA took the initial step toward rulemaking, asking for comments and suggestions as to how to best proceed. The comment deadline is April 6, 2017.

> "EVIDENCE INDICATES THAT THE RATE OF WORKPLACE VIOLENCE IN THE INDUSTRY IS SUBSTANTIALLY HIGHER THAN PRIVATE INDUSTRY AS A WHOLE."

"Evidence indicates that the rate of workplace violence in the industry is substantially higher than private industry as a whole," OSHA states in the document. "OSHA is considering whether a standard is

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needed to protect healthcare and social assistance employees from workplace violence. [OSHA] is interested in obtaining information about the extent and nature of workplace violence in the industry and the nature and effectiveness of interventions and controls used to prevent such violence."

In issuing the RFI, OSHA cited the recent passage of healthcare violence prevention regulations by its state-based program in California. The Cal-OSHA program adopted the new standards[3] on Oct. 20, 2016, with implementation beginning this year. In doing so, Cal-OSHA became the first state OSHA plan — which must have requirements at least as stringent as the federal agency — to adopt a healthcare violence prevention regulation.

The California regulation could serve as a template for a national OSHA standard, says **Bonnie Castillo**, RN, director of health and safety for the California Nurses Association/National Nurses United, which has been lobbying for the law for several years.

"We believe that the California workplace regulations are a model for the nation, and we intend to work to ensure that these protections [are extended nationally] for all nurses, healthcare workers, and the public," she tells *HEH*. "These are the most robust workplace violence regulations in the nation. We are very pleased, but any law or regulation is only as good as its enforcement. We will be involved every step of the way to make sure that [the regulations] are actually followed and enforced."

The Cal-OSHA regulation requires hospitals to establish a written Workplace Violence Prevention Plan that would include a risk assessment of all hospital areas. Some of the risks noted by Cal-OSHA that employee health professionals and their colleagues should identify are summarized as follows:

- healthcare workers assigned to isolated or remote work stations where they may work alone at night or early in the morning,
- poor lighting or blocked visibility in areas where assailants may not be seen,
- lack of effective escape routes,
- obstacles or impediments to accessing alarm systems, which should be periodically checked to ensure they are operational,
- entrances to buildings where unauthorized access may occur, such as doors designated for staff or emergency exits, and
- presence of furnishings or objects that can be used as weapons in patient care areas.

"It's important every area of the hospital — every unit where you have patients and healthcare workers interfacing — is assessed for risk factors that contribute to violence," Castillo says. "[This would include the structural] layout, engineering controls such as lighting and alarm systems. The plan needs to include every single area."

While the California regulation allows flexibility with some specifics at the local level, a common theme is that healthcare workers must be involved in identifying the risks, creating the plan, and conducting subsequent reviews of its effectiveness. Likewise, frontline healthcare workers should be involved in designing and implementing training, reporting, and investigating workplace violence incidents. *(For more information, see story on additional provisions of the California law, page 17.)*

"It is important that nurses and healthcare workers are involved in that process," Castillo says. "In the case of registered nurses, they are there 24/7. There is no better person to be involved in assessing every single work area, and ensuring there is training and [adequate] staffing. Make sure that everybody is aware of how to handle a situation, should it arise, in order to mitigate the risk. [Risk factors can vary] from unit to unit. Some are designed with centralized workplaces where nurses are working closely together. Some are dispersed where they may be working in a pod by themselves and have limited access to other personnel for help should a situation arise. All of these things have to be taken into consideration."

In comments submitted before the regulation was finalized, the California Hospital Association expressed concern that the Cal-OSHA regulations do not "fully recognize the complexity of hospital operations and healthcare at large and that, as a result, the current version of the proposed regulations are likely to cause significant confusion and operational challenges without furthering the goal of mitigating and/or preventing workplace violence."

For example, the California standard calls for awareness of patient risk factors for violence caused by mental health problems or other conditions that may contribute to unpredictable, disruptive, or aggressive behavior. Contributing factors could include medication status and any history of violence known to the healthcare facility or employees. While that seems reasonable enough, the CHA noted in its comments on the rule that "scientific literature is unclear on how to predict whether a patient may be at increased risk for violence."

Though not stated directly in the CHA comments, hospital groups and administrators may have concerns about increased liability for incidents and the creation of burdensome regulations that offer no additional protection for workers. Similar concerns have been expressed at the national level in comments submitted to the federal OSHA public docket after it issued the request for information.

For example, regulations are a large cost factor for employers to address rare incidents, placing employers "in a position of liability over situations in which they have no control," a healthcare administrator told federal OSHA.

"I do not believe any federal or state regulation can do anything more than penalize an employer for an uncontrollable situation," commented **Michael Van Sickle**, administrator of Bethany Lutheran Home in Council Bluffs, IA. "While we can tell our staff to 'run, hide, or fight,' that is realistically the best an employer can do without the police or courts being involved. We already have laws for assault that would cover family assaults on healthcare workers. We have laws about domestic violence that would cover family internal struggles. We have laws and regulations that address patient assaults on caregivers."

Other comments submitted to the federal OSHA docket foreshadow what a national debate on the issue may look like.

"Since the vast majority of the violent incidents and injuries to caregivers are caused by the very persons that we are trying to help, healthcare professionals must be supported in the adoption of strategies to better understand the circumstances and events leading up to these types of behaviors," commented **Bryan Warren**, CHPA, safety director of corporate security for Carolinas HealthCare System in Gastonia, NC.

A good foundation is the creation of rules and standards with which to better prevent and respond to incidents of workplace violence when they occur, Warren wrote. "Healthcare facilities are no longer safe havens, and have joined other previously sacrosanct settings such as houses of worship and schools as prime venues for acts of violence," he told OSHA. "I feel it is of paramount importance that concrete steps be taken to help to mitigate this growing issue and to better equip healthcare workers to detect, prevent, and recover from such incidents when they occur."

Another commenter told OSHA the "status quo" of ongoing violence in healthcare is no longer acceptable.

"I am a registered nurse and a clinical educator," **Zachary Fink**, RN, told OSHA. "While I understand that it is difficult to control the behaviors of those suffering from delirium, confusion, or psychosis, the frightening reality is that many of the perpetrators are completely aware of what they're doing and are capable of making decisions. Currently, healthcare workers are afraid to contact law enforcement on their own for fear that they will suffer repercussions as a representative of their institution, and organizations do little to act on the behalf of the employees in all but the most extreme of situations."

Fink suggested a "clear and purposeful" rule that requires employers to train staff in violence prevention and makes it clear to patients and visitors that aggressive behavior will not be tolerated.

"I feel that these rules will have additional benefit by improving the environment in which healthcare employees work," Fink told OSHA. "Currently, healthcare workers often feel 'trapped' and feel that their rights are infringed upon when they work long hours, are unable to take sufficient breaks, and unable to 'simply walk away' when it would result in patient abandonment. The resulting stress, anxiety, and fatigue all contribute to burnout, compassion fatigue, and an overall reduction of the quality of care that patients receive."

Nancy Bork of Central DuPage Hospital in Winfield, IL, recommended zero tolerance for disruptive behaviors that could escalate into violent attacks.

"Granted, it is a small percentage, but there are many patients and visitors that have become terrible bullies toward heathcare workers," Bork said in her comments. "These behaviors have, unfortunately, been tolerated in healthcare, but you don't see the same behaviors in airports or on planes. Please examine and address the upstream behaviors that precede violence."

While federal OSHA said it would not likely include verbal incidents in an antiviolence rule, the agency did request more information on the issue.

"What approach might the agency take regarding those threats, which may include verbal, threatening body language, and written, that could reasonably be expected to result in violent acts?" OSHA asked in the RFI.

While the Cal-OSHA regulations are in the books, the national effort could run straight into political headwinds with an incoming administration that may not look too favorably on existing regulations, let alone new ones.

"We know at the federal level OSHA [rulemaking] has historically been a much slower process," Castillo says. "However, we know that workplace violence is an acute problem that nurses, healthcare workers, and the public are faced with. We believe that when it comes to ensuring that hospitals are safe havens for patients to make a full recovery, we intend to advocate that every hospital is safe. We are going to be there at the federal level and we will continue to work with various states for state regulations as well."

In a sense, the threat of violence is among the many occupational threats — from needlesticks to patient handling — that require advocacy and action by healthcare workers if protections are to be put in place.

"None of these health and safety regulations came about on their own," Castillo says. "Nurses must engage in education, advocating, and working collectively to take the healthcare industry on. The healthcare industry is privatized and they have concerns primarily with their profit margin. For us, when lives are at risk, we believe that health and safety comes before profits. We are not dealing with inanimate objects, we are dealing with human lives." ■

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Cal-OSHA Violence Prevention Training of HCWs

Could it be what a national standard would look like?

Employee health professionals should be aware of the training requirements of the recently finalized Cal-OSHA regulation[1] to prevent violence in California healthcare facilities, which may serve as a template for a national standard.

Depending on the facility, violence awareness and prevention training may fall to employee health in conjunction with security staff. The Cal-OSHA standard includes the following key provisions on the training of staff:

- The employer shall provide effective training to employees that addresses the workplace violence risks that the employees are reasonably anticipated to encounter in their jobs.
- The employer shall have an effective procedure for obtaining the active involvement of employees and their representatives in developing training curricula and training materials, participating in training sessions, and reviewing and revising the training program.
- Training material appropriate in content and vocabulary to the educational level, literacy, and language of employees shall be used.
- All employees working in the facility shall be provided initial

training when the plan is introduced, and when an employee is newly hired or newly assigned to perform duties for which the training was not previously provided. Healthcare workers who perform patient care duties, and their supervisors, should receive annual "refresher" training.

Training programs should include the following:

• An explanation of the employer's workplace violence prevention plan, including the employer's hazard identification and evaluation procedures, and general and personal safety measures the employer has implemented.

• How the employee may communicate concerns about workplace violence without fear of reprisal.

• How the employer will address workplace violence incidents, and how the employee can participate in reviewing and revising the plan.

• How to recognize the potential for violence, factors contributing to the escalation of violence and how to counteract them, and when and how to seek assistance to prevent or respond to violence.

• Strategies to avoid physical harm.

• How to recognize alerts, alarms, or other warnings about emergency conditions such as mass casualty threats and how to use identified escape routes or locations for sheltering, as applicable.

• The role of private security personnel, if any.

• How to report violent incidents to law enforcement.

• Any resources available to employees for coping with incidents of violence, including, but not limited to, critical incident stress debriefing or employee assistance programs.

• An opportunity for interactive questions and answers with a person knowledgeable about the employer's workplace violence prevention plan.

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CDC Expands Risk Assessment, Medical Exams in Draft Guidelines for Healthcare Workers

New recommendations on preventing occupational infections

Employee health professionals can expect more proactive, informative guidance in the areas of risk assessment and medical evaluations in the upcoming CDC update and revision of its Guideline for Infection Control in Healthcare Personnel.

Originally published in 1998, the guideline must now address not only new infectious threats, but sweeping regulatory changes, says **David Kuhar**, MD, a medical officer in the division of healthcare quality promotion at the CDC.

"When we started looking at updating the [1998] guideline, one of the things that came up from the user community is that the section that addressed the infrastructure of the occupational health service for providing infection control to healthcare personnel was not the most useful section of the [old] guideline," he tells *Hospital Employee Health*. "So we tackled that section, looking at not only what has changed since 1998, but how can we make this more useful for readers. That is how we approached it. We needed more detail to resonate with occupational health providers."

Among the issues addressed in a draft of the guidelines is the employee health role in the assessment and reduction of infection risks to healthcare workers. A draft version recently discussed at a meeting of the CDC's Healthcare Infection Control Practices Advisory Committee (HICPAC) calls for administrators and leaders of healthcare organizations to regularly review results of risk assessments related to occupational infection prevention, set performance goals, and reduce risks.

Employee health leaders and staff would conduct the risk assessments or collaborate with colleagues to identify and reduce occupational infectious threats to workers. As recommended in the CDC draft, they would also participate in committees and decision-making processes that affect occupational infection prevention efforts. Employee health would advise colleagues and administrators on risk reduction strategies and other occupational infection prevention issues.

A section on conducting medical evaluations of healthcare workers has also been expanded and is more prescriptive in terms

of recommendations. For example, the draft guidelines emphasize the importance of "pre-placement" medical evaluations be done after a worker is hired, but before they are assigned to a specific duty or area in the hospital. These exams would include looking for any immunity problems, pregnancy, or other conditions in the worker, as well as the risk of infections associated with their designated duties.

These exams would be followed by periodic and "episodic" medical evaluations, with the latter most likely occurring in the context of an exposure or outbreak. Of course, immunization status for various conditions would be assessed as part of ensuring all recommended vaccinations are given. In addition to serologic testing for evidence of immunity, (e.g. immune response to hepatitis B vaccine) and periodic tuberculosis screening, employee health professionals would provide or refer workers for medical clearance for respirator fit testing. With the first sections of the draft expected to open for review and comment in the coming months, Kuhar spoke to *HEH* about the ongoing revision process.

HEH: This guideline seems to be advocating a much more proactive role for employee health in terms of risk assessment, communication with leaders, and participation on committees. Is this suggesting a more formalized role than has traditionally been apparent in employee health programs?

Kuhar: Since 1998 quite a lot has changed, and among those changes were a number of new regulations that affected occupational health services to personnel. There were new OSHA standards, like the respiratory protection standard, that require training as well as education for workers who have to use respirators as part of their work duties. The other issue is there are a lot of requirements from accreditation and federal agencies, like CMS [requiring] reporting of healthcare influenza immunization rates [of HCWs]. As occupational health programs are [performing these functions], we wanted to indicate that they provide services that, in a way, are irrevocably tied to these [and other] markers of quality of care.

When we went to update this, we had to consider what are the things that people are expecting occupational health services to do? What is reasonable to ask that all occ health providers across the nation be prepared to at least be involved in? We wanted to put those forward, so we added two new elements, if you will, to an occ health service that we thought were important. One of those is assessment and reduction of risk among populations of healthcare personnel. So for that section, we wanted to put forward that assessing risk in the workplace is something that occupational health providers are often asked to be a part of. Not always to lead, but to be a part of. That's why we were careful in the way we recommended it — to make sure we were not placing the burden solely upon their shoulders, but we wanted to indicate this is something that occ health providers need to be a part of because they can provide valuable input.

HEH: If I understand you right, you are making this guideline more proactive and detailed for employee health professionals, but you don't want it to be too onerous for those that don't have the resources.

Kuhar: You're basically right. The real challenge in this is the diversity in how occupational health services are provided out there. Larger healthcare organizations might have an onsite group that provides this for the organization, but small freestanding facilities may contract their services from a provider that is not part of their organization. The diversity in these services means that not all occupational health providers have access to the facility and [employee] data. We wanted to be careful to not inappropriately place ownership of, for example, walking through a workplace to assess it for safety, when they may be a contracted offsite health service.

However, they could be asked to do it, so we wanted to be sure that we framed the recommendations in a way that was sensitive to those that might not have the access to provide those services. So we made them generally applicable to raise people's awareness that these issues are important — to raise their awareness to the things that are being asked for by payers, purchasers, and accreditation agencies. Hopefully [this will] facilitate their ability to provide these services.

HEH: Are you going to get into the ongoing issue reported in some studies about the lack of compliance with respirator guidelines, meaning in some cases they are no more effective against respiratory infections than surgical masks?

Kuhar: I would say that is probably an issue for a different guideline — more related to the effectiveness of infection control measures. What we wanted to do here is highlight the role that occupational health services might play in facilitating readiness to use a respirator. You use your pre-placement medical evaluations to assess a provider's ability to use a respirator in compliance with OSHA requirements. If your staff needs to use a respirator, then those

assessments need to be repeated [annually or periodically]. This guideline is really focused on what items occupational health service providers are going to do [to ensure] personnel are ready to use a respirator. Typically, occupational health services will do the medical clearance for respirator fit testing, and then depending on the structure of the program, some people have separate fit testers and some occ health services might do the fit testing. It depends on how their program is set up.

HEH: Medical evaluations in this draft guideline also seem to have more specificity and detail than the 1998 CDC guidelines. Are there new issues and conditions you now have to think of including in the medical evaluations?

Kuhar: Right, we are proposing a more extensive medical evaluation section. However, I would say that what you might do in a medical evaluation has not changed drastically since 1998. There are more requirements that affect how we do a medical evaluation, and we added more detail on the type of medical evaluations that occupational health service might provide.

We highlighted the importance of the pre-placement evaluation. This is after the person is hired but before they actually start their job duties. They have a medical evaluation to address their risks of acquiring or transmitting infections at work as well as to address their evidence of immunity and possible need for immunizations before they set foot on the wards. We also wanted to highlight the need for periodic evaluations, there might be planned repeated visits to the occupational health clinic, as well as the episodic ones — say, when an exposure has happened. We wanted to offer much more specific guidance as to the types of medical evaluations that occupational health services typically provide. ■

Healthcare Workers Fired for Refusing Flu Shots for Religious Reasons Win Legal Battle

Six workers win back pay, damages, reinstatement

As this issue went to press, six healthcare workers fired for refusing mandatory flu shots for religious reasons won back pay and offers of reinstatement from Saint Vincent Hospital in Erie, PA, according to published reports.[1]

The case could have implications for the increasing number of hospitals requiring influenza vaccination as a condition of employment, as the hospital agreed to compensate the workers some $300,000 for lost wages and compensatory damages after the U.S. Equal Employment Opportunity Commission (EEOC) filed suit in September 2016.

Saint Vincent representatives could not be reached for comment as this story was filed, but a statement cited in media reports and attributed to the hospital's corporate parent, Allegheny Health Network, states, "The consent decree filed this week between the EEOC and Saint Vincent Hospital does not constitute any admission of violations by Saint Vincent or a finding on the merits of the case. Although we have vigorously and respectfully disagreed with the EEOC's position and characterization of how employee claims outlined in this lawsuit were handled by the hospital, we have reached a resolution of the matter in the interest of avoiding the expense, delay, and burden of further litigation on all parties."

In addition to back pay, the hospital system must also offer the six employees jobs comparable to the ones they held if any open within the next two years, according to press reports.

How did the hospital get itself in such a tenuous legal position? Some clues may be found in the Sept. 22, 2016, EEOC complaint,[2] which cited the federal Civil Rights Act in accusing the hospital of "unlawful employment practices on the basis of religion."

More specifically, the EEOC complaint alleges "discrimination because of religion by failing to accommodate their sincerely held religious beliefs and practices that prevented them from receiving the influenza vaccine."

Among the faiths and beliefs cited by the workers were Russian Orthodox, fundamental Baptist, and Christian mysticism. The latter belief was cited by an RN that was also described by the EEOC as an "ordained interfaith minister and a practitioner of Christian mysticism according to the teaching of 'A Course in Miracles.'"

According to the EEOC complaint, some workers enlisted spiritual leaders to contact the hospital and some described their beliefs in writing. The exemptions were not granted, with the hospital ruling in some cases that the workers failed to provide "proof" of the religious doctrine, the EEOC complaint states.

"In the 2013-2014 flu vaccination period, the period in which the defendant [St. Vincent] denied the religious exception requests [of the six HCWs], defendant received 11 employee requests for exemption from the mandatory influenza vaccination requirement that identified religious grounds as the basis of the requested exemption," the EEOC alleges in the complaint. "Defendant denied all 11 religious exemption requests."

In contrast, some religious exemptions were granted for the 2015-2016 flu season, the EEOC stated, suggesting the agency was going to argue that the hospital policy was inconsistent. According to press reports, the consent decree between the EEOC and Saint Vincent states that the hospital, going forward, "shall not require proof that an employee's or applicant's religious objection to vaccination be an official tenet or endorsed teaching of any religion or denomination."

Weighing the implications of the lawsuit for employers, a law firm noted in a blog post,[3] "the EEOC seems to be on a march to challenge any employer — particularly hospitals — that denies an employee a requested exemption from a mandatory flu shot for religious reasons. … [G]iven the EEOC's aggressive position on this issue, it is critical for any employer who is going to deny an employee's request for an exemption to, first, carefully explore what accommodations can be offered to the employees, and second, document the reasons for the denial. If disciplinary action against an employee is contemplated, you should consult your legal counsel."

If the case had gone to trial, the hospital would have certainly played the patient safety card, though whether that would have been enough to trump the allegations of religious discrimination will remain unknown. In the historical debate about whether healthcare workers should be required to have seasonal influenza shots, sometimes the issue of whether and how much flu is actually transmitted by caregivers to vulnerable patients has been viewed with some skepticism.

For example, an oft-cited 2013 Cochrane review concluded that there were "no accurate data" supporting the vaccination of healthcare workers to prevent laboratory-confirmed influenza in long-term care residents age 60 years and older.[4]

However, in addition to broad consensus among healthcare epidemiologists, there is accumulating evidence that healthcare workers do, indeed, transmit flu to patients, some of whom are in ICUs and may end up dying. That's something of a broad takeaway from a study[5] presented at the IDWeek conference, as investigators with the CDC reported that 1% of flu cases reviewed were acquired in the hospital.

"Hospital-acquired influenza cases continue to occur and are likely underestimated," said **Charisse Cummings**, MPH, an epidemiologist at the CDC who presented the study. "Clinicians should think to test for influenza in patients admitted for non-respiratory issues, who then develop respiratory illness during hospitalization."

That percentage should be considered an undercount because the study design ruled out many cases for insufficient data, erring on the side of a conservative case count that was also limited by whether a provider decided to order a flu test on a given patient. Vaccination rates of healthcare workers or possible factors contributing to transmission were not assessed as part of the study.

"Hospital-acquired (HA) influenza represented 1% of patients in our hospital surveillance over four influenza seasons," the researchers reported. "Since testing was clinician-driven, prevalence may have been underdetected if influenza was not suspected and tested. Influenza vaccination in healthcare workers and family members of high-risk persons, good hospital infection control [to prevent transmission from other patients], and limiting ill persons from visiting or working in hospitals should be encouraged."

The study included patients from the CDC's Influenza Hospitalization Surveillance Network from 2011 to 2015. The flu had to be confirmed by symptoms and testing more than three days after admission to be considered hospital-acquired.

Overall, 41,974 patients had flu and the researchers determined that 463 (1%) of them acquired it in the hospital. Those hospital-acquired cases included 417 adults and 46 children. Of interest regarding discussions of the healthcare continuum, 31 (7%) cases determined to be hospital-acquired had been transferred from another hospital and 66 (14%) came in from a nursing home, the researchers reported.

Overall, 91% of those who acquired flu in the hospital had underlying medical conditions, principally cardiovascular, neurologic, immunological, and renal problems.

"The median length of stay after influenza diagnosis was six days," the

researchers reported. "Of 463 HA cases, 126 (27%) were in the intensive care unit before HA influenza diagnosis, 22 (5%) were admitted to the ICU on or after the date of HA influenza diagnosis, and 36 (8%) died."

"Among cases with complete ICU admission and discharge dates, 30% developed hospital-acquired influenza during ICU stay," Cummings said. "In addition, [another] 30% who tested positive one to seven days after ICU discharge may have been exposed to influenza during their ICU stay. The length of stay was considerably longer for hospital-acquired influenza compared to community-acquired influenza." ■

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Tips and Strategies for Post-exposure Follow-up of Healthcare Workers

Clinicians share real-world experiences

Consider this scenario: A healthcare worker dons a surgical mask to enter the room of a patient on droplet precautions for respiratory infection. The diagnosis is updated when it is discovered that the patient actually has TB, which calls for airborne precautions that require an N95 respirator or something equivalent. Should the healthcare worker who wore the surgical mask be considered exposed to TB?

"To the best of my knowledge, there has never been a healthcare worker who acquired TB because they were just wearing a surgical mask," said **David Weber**, MD, MPH, an epidemiologist and professor at the University of North Carolina School of Medicine in Chapel Hill. "That said, there is no question that when you do air flow studies that an N95 has better filtering capacity both through the mask and, more importantly, around the mask because it is a better, tighter fit. But we wouldn't treat somebody wearing a surgical mask — if they wore it properly — if [the TB patient] was mistakenly put on droplet precautions. We wouldn't consider that an exposure."

The lead author of a recently published paper[1] on healthcare exposures to infectious agents and post-exposure treatment, Weber fielded questions on the topic in a wide-ranging interactive session recently at the IDWeek 2016 conference.

"What is the [TB] risk if you don't wear a mask at all?" he said. "We've looked at our data, and if you look at the CDC guidelines they don't consider it an exposure [until after a certain] number of hours. So walking into a room for 20 minutes would not be considered an exposure. If you are on a plane with [someone who has] TB, they only track you down if you are on the plane for more than four hours. So recognize that time is also relevant. When we have looked over 30 years, the risk [of infection] after being exposed to TB — we've never tried to break it down by time; we don't have enough data — is about 0.5%. So there is about a 1 in 200 risk of converting your TST test or your IGRA if you take care of a TB patient without wearing a mask."

Of course, there are outliers on either end of the spectrum, given the variables in a patient's infectivity, the worker's immune status, and nature of the interactions.

"We've had cases in the olden days where they didn't wear masks routinely during bronchoscopy, and everybody in the bronchoscopy suite converted," he said. "We have had patients in the hospital for weeks before they made the diagnosis of TB and no one converted."

If employee health determines an exposure has occurred, Weber recommended moving out from the index case in concentric circles depending on healthcare worker contact.

"If we have lots of people, we look

the most exposed," he explained. "If we see any conversions, we will go to the people less exposed and work our way out. [This is preferable] to just testing everybody, like someone in dietary who just came in to drop a tray off."

The importance of counseling exposed workers is critical, particularly in situations where healthcare workers are concerned about becoming infected, said **Tom Talbot**, MD, co-speaker at the session and epidemiologist at Vanderbilt University School of Medicine in Nashville. He described a disturbing case of the death of patient with meningitis, which was followed by the need to determine which workers were exposed and who needed post-exposure prophylaxis.

"We had a very devastating case of a 19-year-old college freshman that came in with meningococcal disease, was the in the ED and being coded for about 90 minutes, and passed away," he said. "It was a very traumatic experience for the healthcare workers, and then later on they became worried about their risk. I remember sitting in the ED for about two hours and folks were coming in and saying, 'I did this, I walked into the room, I handed some supplies,' and asking, 'Am I at risk?' That is probably the most striking example. This is really important because people see this horrible illness and then they get scared. It is really important to remember that piece of it. Often the risk is still fairly low, but just reassuring them and particularly [underscoring] prophylaxis if they do need it."

For exposures in general, it is often a matter of practicality to delineate those exposed from those nonexposed as the point when the decision was made to place the patient in isolation, Talbot noted.

"But in the real world, there are people who come into the room without wearing all the PPE, and other factors," he said. By the same token, it is sometimes more workable to consider those exposed as those who entered the room when the patient was undiagnosed rather than trying to determine if they got within, for example, three to six feet from the patient.

"We used to have a policy that if you were immune [to the patient's infection], you didn't have to wear PPE," Talbot said. "We stopped that and I think more places are stopping that for a couple of reasons. One, vaccines are not 100% effective, so workers are still at risk, but I think perhaps more importantly is if other healthcare workers see me [not wearing PPE on room entry]. They don't know my immune status and may think it is not necessary to wear PPE to go into the room. You can't explain that in real time, and people see your behaviors so [our policy now] applies to everybody. You walk in the door, you wear the stuff. Yes, you spend some money on PPE, but you reduce the risk of someone getting exposed."

In the wake of the widespread PPE problems reported during the Ebola outbreak, the CDC is piloting some tools that would require observation of workers donning and doffing protective equipment, Talbot said. The concept is theoretically sound, but may be labor-intensive in facilities with a large number of employees, he noted.

"The health department in Tennessee is piloting this CDC tool," he said. "It is much more prescriptive on how you train your healthcare personnel not only in hand hygiene, but the use of PPE to the point of hands-on annual competency of all personnel — not just watch a PowerPoint every year, but actually watching them put on and take off the PPE. The other piece of it would be — like we monitor handwashing — really prescriptively tracking how well we use our PPE in precautions and feeding that back to folks. That is something that has emerged from Ebola."

In terms of post-exposure prophylaxis (PEP) for HIV, Weber reminded that occupational health requirements stipulate the use of the "most recent" public health recommendations.

"They take the [PEP] recommendations and make it a regulation, so as the guidelines get updated by the public health services for post-exposure prophylaxis for HIV — the timing, tests, drugs — you are bound to follow that guideline by law," Weber said.

Another good measure to protect workers is to automatically implement isolation when a test is ordered; for example, measles.

"We don't see much measles, mumps, or rubella, fortunately, but we do need to be concerned about those," Weber said. "One of the problems with mumps is that it is not a rash disease and people don't think of it when somebody comes in with a little swelling or just feeling poorly. And the problem with both measles and rubella is that, probably, most of the house officers and most of our junior faculty have never seen a case. We actually had an exposure with this because the Hare Krishna community was not receiving MMR vaccines. They have no philosophical oppositions to vaccines, but they are strict vegetarians and the vaccine is made in eggs." ■

REFERENCE

1. Weber DJ, Rutala WA, et al. Occupational health update: Focus on preventing the acquisition of infections with pre-exposure prophylaxis and post-exposure prophylaxis. *Infect Dis Clin N Am* 2016;30:729-757.

Healthcare Workers Don't Mind Masking to Protect Patients

Viral infections fall dramatically in stem cell patients

A universal masking policy for healthcare providers and home care workers dramatically reduced respiratory viral infections in hematopoietic stem cell transplant (HSCT) patients, researchers report.[1]

Routine required mask use has been associated with some pushback in some instances, particularly when used as a policy for healthcare workers who decline flu shots. However, in this case, healthcare workers were on board with enthusiasm once they understood the risk to a vulnerable patient population.

"Everyone was very compliant and they realized the importance of the issue," says **Mitchell E. Horwitz**, MD, associate professor of medicine and director of the Clinical Research Adult Blood and Marrow Transplant Program at Duke University Medical Center in Durham, NC. "These are not N95 [respirators] and uncomfortable. They are surgical masks and much easier to tolerate. Anecdotally, the head nurse believes there were fewer respiratory infections among nursing staff because they were wearing masks more frequently and there were less infections being passed from nurse to nurse."

Parainfluenza virus 3 (PIV3) — the primary threat to this particular patient group — was reduced sharply from an infection rate of 8.3% to 2.2% following the mask intervention.

"That really is the virus that was most prevalent in our population and causing the most symptoms," he says. "Influenza and respiratory syncytial virus are much more serious, but fortunately, not as common. Whether [this intervention] would help reduce those viruses is not clear because of the relatively low numbers, but the parainfluenza was the biggest [factor] and was really the impetus for the study."

The surgical mask policy requires all workers in inpatient and outpatient HSCT facilities with direct patient contact to wear surgical masks regardless of symptoms or season. While standard infection control procedures are effective against respiratory infections, they may be insufficient to prevent the spread of PIV3. That is because providers and others with PIV3 may shed virus while asymptomatic, Horwitz explains.

Thus, standard droplet precautions that focus on symptomatic patients (or workers) may not be protective. Similarly, strategies that increase infection control measures during the winter influenza and respiratory syncytial virus (RSV) seasons neglect PIV3, which peaks in the summer months, he notes.

The Duke stem cell unit was hit hard with respiratory infections in 2009, leading to the creation of the new policy: All healthcare workers and caregivers of HSCT must wear a surgical mask around the patients. The masking policy was in effect year-round.

The researchers compared the infection rate from the period of 2003-2009 to the post-intervention timeframe of 2010–2014. Overall, respiratory infections dropped from a rate of 10.3% in the no-mask period to 4.4% after the policy. Significant decreases were seen for both allogeneic and autologous transplants. Again, infections due to PIV3 comprised the majority of the reduced infections.

The findings suggest that the asymptomatic workers may have spread viral infections to patients prior to the masking policy.

"Yes, that is certainly true, and it also was true of the [home] caregivers that were involved with the patient management," Horowitz says. "When someone is going through a bone marrow transplant, at least in our program, they spend a lot of time out of the hospital. So by instituting this not only by healthcare providers, but by caregivers at home, I think that is how we were able to have this impact." ■

REFERENCE

1. Sung AD, Sun J, Thomas S, et al. Universal Mask Usage for Reduction of Respiratory Viral Infections After Stem Cell Transplant: A Prospective Trial. *Clin Infect Dis* 2016; 63(8):999-1006.

COMING IN FUTURE MONTHS

- OSHA under Trump: Will anti-regulatory mood erode worker protections?
- Training tools for HCW use of respirators
- You're a new employee health professional. Now what?
- Know the risk factors for fatigue to protect patients, HCWs

HOSPITAL EMPLOYEE HEALTH

CE INSTRUCTIONS

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

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CE QUESTIONS

1. A new Cal-OSHA violence prevention regulation that may serve as a template for a national standard calls for frontline healthcare workers to be involved in assessing risk and developing training.

A. True
B. False

2. The Cal-OSHA regulation calls for awareness of patient risk factors for violence caused by mental health problems or other conditions that may contribute to unpredictable, disruptive, or aggressive behavior. Contributing factors cited include:

A. medication status.
B. being placed in patient isolation for infections.
C. being admitted through the emergency department.
D. all of the above.

3. According to David Kuhar, MD, of the CDC, draft guidelines for preventing healthcare worker infections call for which of the following type of evaluations?

A. Pre-placement
B. Periodic
C. Episodic
D. All of the above

4. In a complaint against a hospital for firing workers who refused flu vaccination for religious reasons, the U.S. Equal Employment Opportunity Commission cited what federal law?

A. Americans with Disabilities Act
B. OSHA general duty clause
C. The First Amendment
D. Civil Rights Act

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.