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INSIDE

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Hospitals Fail to Capture Violent Incident Reports

Reporting subjective, data lost in silos

By Gary Evans, Senior Medical Writer

While there is general consensus that violent incidents against healthcare workers are underreported, a closer look reveals a more nuanced view of the problem.

Many incidents are actually reported by word of mouth and even documented in various logs and systems. The problem is that these incident data too often remain in separate silos and are not compiled into systemwide active surveillance that could reveal a more complete picture of violence in a healthcare facility, says **Lisa A. Pompeii**, PhD, the lead author of a new study[1] on reporting of violence in healthcare.

As it currently stands, violent and threatening incidents, if they are mentioned at all, may be reported to "solo databases" such as security, employee health, and nurse managers, says Pompeii, an associate professor in the Southwest Center for Occupational and Environmental Health at the University of Texas Health Science Center in Houston.

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"What OSHA recommends, and I agree with, is that all the disparate pieces of information and lists need to be collected in one place," she says. "[That way] you have some oversight of all the different places of where it is being reported and you can

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get a better picture of these events."

In addition, there are signs that the work culture in some hospitals and healthcare settings may contribute to an escalation of violence. A review article[2] published earlier this year found that "episodes of workplace violence of all categories are grossly underreported." The author noted that nurses cite fear of retribution from supervisors and disapproval of administrators as barriers to reporting, possibly due to a prevailing "the customer is always right" mentality.

While agreeing with the review paper and the importance of the findings, Pompeii and co-authors dug deeper into the issue of incident reporting. "Our findings contradict prior findings that workers significantly underreport violent events," they noted. "Coordinated surveillance efforts across departments are needed to capture workers' reports, including the use of a designated violence reporting system that is supported by reporting policies."

Reporting, But to Whom?

To address the issue, Pompeii and colleagues used surveys and focus groups to examine reporting of Type II violence (patient/visitor to worker) among 11,000 healthcare workers at six U.S. hospitals. Of the 2,098 workers who experienced a violent event, 75% indicated they reported to managers, co-workers, security, or in the patient medical record. However, only 9% reported it into their occupational injury and safety reporting systems. Workers were unclear about when and where to report, and relied on their own judgment and tolerance in deciding whether an event was violent and whether to report it.

"We found that everyone has a different 'threshold' [of what is a violent incident] and they have a different threshold for reporting," Pompeii says."

For example, a nurse in one focus group said she was called a "bitch" by a patient, but did not report it and dismissed the incident.

"A nurse in another focus group said, 'If you call me a bitch I'm going to report you,' Pompeii says. "Everyone has a different threshold and that's why a workplace violence reporting policy is needed that actually defines what workplace violence is according to the hospital, and when they want it reported."

With these subjective thresholds in play, it follows that there are a variety of reasons healthcare workers do not report incidents.

"The main reasons they don't report are pretty established," Pompeii says. "They don't report because of the fear of retribution, it takes too much time, they don't think the managers will listen, or they don't think it was serious enough."

The retribution may be fear of the patient, but also fear of running afoul of hospital management. The aforementioned perception that the patient/customer is "always right" resonated in the surveys and focus groups.

"There really is a heavy emphasis on customer service — the customer is first — and that is how the worker perceives it," she says. "When we did our focus groups we found that some workers were not comfortable coming forward because they did not feel their managers were supporting them. Or they felt that immediate management supported them, but those above them would give them

a hard time. But I think they are also afraid of the patients."

Interestingly, the researchers found a "witness effect," as workers who were accompanied by a colleague when the incident occurred were more likely to report it.

"But a significant finding was that if the worker was alone, they were less likely to report it," she says. "I think they are afraid they are not going to be believed."

Healthcare workers may also be conflicted about "telling on" a patient under their care. The upshot of all of these factors is that in absence of clearly delineated policies, reporting of violent incidents is beset by a host of variables and subjective perceptions.

"I think hospitals need to stop relying on traditional reporting systems," Pompeii says. "They need to reach out more to workers, they need to survey on a routine basis, maybe anonymously, about the events and what they are experiencing."

This proactive effort can be an adjunct to established reporting systems, but the main thing is that violence prevention policies clearly define violence and emphasize when and where it should be reported, she says.

"They need to be real clear and train their workers on that," she says.

Better documentation could provide needed detail to the scope of a problem that is concerning enough in its general, undefined state.

Citing the increasing threat of violence in healthcare, The Joint Commission (TJC) recently launched a workplace violence prevention portal to help hospitals respond and prepare through a variety of resources. *(The portal can be viewed at: http://bit.ly/2d8U2IW.)*

"The violent situations occurring across our country spill over into our emergency departments, behavioral health settings, and elsewhere," **Ann Scott Blouin**, RN, PhD, FACHE, wrote in a TJC blog post. "In a matter of seconds, your patients, staff, and visitors can become victims in these frightening, and often devastating, situations."

The Joint Commission portal is comprised of various resources and strategies from researchers and clinicians in the field. Nurses on the frontlines of healthcare are the group most likely to be confronted with violence. In that regard, TJC cites a 2009 poll that 80% of nurses did not feel safe at work.

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The problem does not appear to have improved. Between 2010-2014, TJC received reports of 19 shootings in accredited healthcare settings, resulting in 27 fatalities, Blouin notes. In addition, **Ron Wyatt**, MD, MHA, DMS, medical director of TJC Division of Healthcare Improvement, reports there has been an increase in violent crime, from 2.0 events per 100 beds in 2012 to 2.8 events per 100 beds in 2015.

As lead author of a new study[3] posted on TJC's violence portal, Wyatt also noted that incident reporting is an ongoing problem.

"[HCWs] underreport violent events because they believe these experiences are part of the job, reporting is either cumbersome or unlikely to result in action from leadership, or they fear retaliation for reporting," Wyatt and co-authors noted. "For these reasons, reporting systems should be simple, trusted, secure, and with optional anonymity; result in transparent outcomes and delivery of a report confirmation; and be fully supported by leadership, labor unions, and management."

Workplace violence prevention should be included in all new-employee training and in ongoing education of all employees. "Programs aimed at prevention of workplace violence should include employee training and awareness, reporting, threat assessment, management plans, and a communication strategy. All employees should have training relevant to the risk for violence that may exist in their respective workplaces," Wyatt emphasized in the paper.

Close Encounter

Wyatt spoke on the critical role of hospital leadership in an interview on *Radio Health Journal*, saying, "Leadership is at the table. They're not saying, 'Go have a meeting on this every quarter and let me know what you decided.' Leadership has to be at the table actively engaged

in the entire process if you want to build what we call a robust workplace violence prevention program." *(Audio and transcript of the interview can be found at: http://bit.ly/2dQcQiH.)*

He also recalled a harrowing encounter that ended without injury, but took a strange turn when he entered an exam room to see a new patient, an older woman accompanied by her husband.

"When I walked in she reached in a shopping bag and pulled out this really large photograph of a former patient of mine," Wyatt said in the radio interview. "I immediately recognized the patient. How could I not? Because she was a young woman who died quite unexpectedly. I said to them, 'I can't talk to you about this patient.' At that point the gentleman moved behind me, and in a soft voice he said, 'You're going to talk to us, or you're not going to leave this room.' I did not have in that setting any way to alarm the staff. What I chose to do was sit and talk to them. One of the concerns was well, if this guy has a gun, or she has a gun in the bag, then I'm going to put other people at risk if I start to fight with them to get out of that room."

The couple left without incident after he showed them computer records of everything that had been done to try to save their daughter. He never saw them again, he said. ■

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Mind the Gap: Employee Health and the Millennial Generation of HCWs

Tech savvy, ergonomically challenged

As healthcare demographics continue to shift, the older generation is giving way to a new wave of healthcare workers known for their lifelong relationship with technology.

These "millennials" generally range in current age from 18 to 34 years. These incoming healthcare workers present unique challenges for hospital employee health professionals, as many are both tech savvy and ergonomically challenged.

"Management tends to look at millennials as a 'different' workforce but, in actuality, each generation had their own 'quirks,' so to speak," says **Kathy Espinoza**, assistant vice president of ergonomics and safety for the insurance brokerage and consulting firm of Keenan & Associates in Torrance, CA. "Boomers were the rebellious, long-haired 'hippie people' of the '60s and felt entitled to challenge the status quo, and still do. Boomers have always been the largest group in the workforce, but they no longer reign."

Indeed, census data for 2015 indicate there are some 75 million millennials in the workforce, surpassing the boomers and heading toward a projected peak of 81 million in 2036, she notes. Espinoza recently spoke on this topic at the annual conference of the Association of Occupational Health Professionals in Healthcare and agreed to field a few questions from *Hospital Employee Health*.

HEH: Can you comment generally on some of the ingrained habits these workers bring to a healthcare setting, i.e., poor posture and work habits that are far removed from the sit-straight-up-and-type days?

Espinoza: Millennials grew up with technology and don't know a world without it. The problem is that it's 'mobile' technology, which allows them to use their devices at the kitchen counter, in bed, on a couch, at the table, while gaming, yet rarely at a typical workstation. They have lived with poor, slouching posture since they were able to turn the device on.

The problem with the new millennial workers is that what feels typical and normal is actually a 'high-risk' posture that we know is not good for them. Normally, we tell employees to let comfort be their guide, but this doesn't work with millennials. They have become

accustomed to their poor posture and now, when at the workplace, this 'new' posture feels awkward to them. That's why the education behind the ergonomics becomes so important. The employer's attitude of "because I said so" doesn't work when trying to get millennials to pay attention to their posture. They need to understand why it's important to have better posture. Risk factors for injury have not changed — the "exposure" to technology has changed.

One of the biggest differences seen with millennials is that they are not "touch typists." Computer keyboarding and business typing is not taught in schools as much anymore. The "hunt and peck" method of input forces the user to type with their head down for extended periods of time, which can become painful.

HEH: On the plus side, what are some strengths millennials bring to the healthcare workforce? For example, given their tech mastery, are they easier to train?

Espinoza: Millennials bring many strengths to our healthcare workforce. They grew up working within groups or teams in the classroom, so they integrate well within departments and with 'team' assignments. Growing up with technology allows them a greater understanding and acceptance of online types of training. They accept the fact that technology changes often and they applaud upgrades and new systems to discover. Boomers had to 'adapt' to technology, whereas millennials 'embrace' it. Millennials are a very creative group and bring an excitement to the healthcare workforce. They are most likely to ask, "Why do we do it that way?" so it's important to listen to them and hear their ideas to make the work process smoother. Another fabulous characteristic of millennials is that they are very civic-minded. They want to do the right thing for the right reasons and make the world a better place. This is great news for employers because they will champion a recycling program, volunteer and community efforts, and will enhance the healthcare organization's brand image.

HEH: What are some strategies hospital employee professionals can use to reach this group in terms of ergonomics training and general safety and wellness?

> "THE LINE BETWEEN WORK AND HOME HAS NEVER BEEN MORE BLURRED THAN IT IS TODAY WITH SMARTPHONES THAT ALLOW US TO EMAIL, MESSAGE, AND TEXT."

Espinoza: Everyone, not just millennials, can get stuck in a bad habit or routine. It's important to include ergonomics, safety, and wellness up front by including these topics in the new hire onboarding process — the earlier, the better — before bad habits set in. Millennials started life with terrible tech habits and have gotten used to them.

HEH: You mention that these workers may have pre-existing ergonomics injuries. Can you elaborate on the causes and how this issue should be addressed by employee health professionals?

Espinoza: The problem is that they are entering the workforce with pre-musculoskeletal injury levels that most employees typically don't experience until they've been working for 10 or 20 years. To compound this, their 'after-work' activities should be addressed as well. Common Sense Media reports that in 2015, the average teen — your future hire — spends nine hours a day on a device. Add these nine hours to their new job on a computer and you have a 'claim-ready' new hire.

Many years ago, people didn't bring work home or become consumed with technology and devices after work. They may have mowed the lawn, puttered around the house and talked to each other, eye to eye. Today, millennials tend to come home from work and game for hours. It's important to educate them on proper posture and habits at work and at home. The line between work and home has never been more blurred than it is today with smartphones that allow us to email, message, and text. So, where did the injury occur — at home or at work? For employee health professionals, this means talking about what they do at home and how to make that safer and more comfortable (e.g., laptop and tablet stands). The bottom line is that work may not be causing the problem — work may be exacerbating the problem.

Another point to remember with millennials is they grew up in a world where "everybody got a trophy." With ergonomics, if the employee health professional provides an ergonomics evaluation to one employee, they must be prepared to help everyone in the office. If an employee has a claim which provides a secondary gain of a new sit/stand workstation, a better keyboard, a new mouse, new chair, etc., you could have a case of 'ergo envy' that will have everyone else in

the office putting in a claim just to get the new equipment. Be prepared to 'share the ergo love' around the office. Take the time to adjust everyone's chairs and monitors and let them know they are important, too.

HEH: Any points of emphasis you would like to make not addressed in these questions?

Espinoza: A final note to healthcare professional boomers: Millennials are here to stay and there is a good chance that we will all be working for one soon enough. It's important to realize that habits are hard to break, feedback and follow-up are very important to millennials, and that they enjoy communicating with you through text, using their own language. To help you with the integration, here are a few fun examples on understanding their language and texts:

LOL: To a millennial, this means Laugh Out Loud. To a boomer, it means Life on Lipitor.

BFF: This means Best Friends Forever to millennials. To boomers, it means Best Friend's Funeral.

IMHO: In My Humble Opinion to millennials, to boomers this means Is My Hearing-aid On? ■

Key Strategies for Millennial Workers

Ergonomic advice on a new wave of HCWs

Kathy Espinoza, assistant vice president of ergonomics and safety for the insurance brokerage and consulting firm of Keenan & Associates in Torrance, CA, suggests employee health professionals consider the following strategies with healthcare workers from the millennial generation in these direct quotes below.

Onboarding: "Include ergonomics, safety, and wellness in the new hire onboarding process. The longer you take to work with them on setting up their workstation, the longer their bad 'habits' solidify into your healthcare organization."

Involve IT: "Set their workstations up properly from day one. This means training your IT team on proper workstation setup when delivering their computer, mouse, keyboard, etc. Don't wait until the millennial worker complains of pain to address proper ergonomics."

Purchasing: "Get your purchasing department on board with well-proven ergonomic solutions. Don't allow the employee to purchase what they think they need. Not everything that has an 'ergo' label is a valid product, so educate the purchasing department."

Wellness: "Ergonomics should be a solid part of your wellness program, and vice-versa. A healthy, well employee can still get injured, but their recovery time is quicker."

Embrace online training: "Online training is the preferred method of learning for millennials. Boring, classroom-style training is frustrating to them and they are easily turned off. Recognize their brains are moving faster than other generations of workers. Look at TV commercials now days — they move from screen to screen at a fast pace, with loud music and many moving parts. Movie credits back in the 1940s were held on the screen for 10 seconds, whereas today, they are on for four seconds.

As healthcare trainers on ergonomics, safety, and wellness, it's important to jazz up our trainings so they are appealing to this faster-paced generation."

Feedback: "More than any other generation, millennials need constant feedback. Boomers expect feedback once a year at their annual performance evaluation, but millennials need it much more often. Schedule a follow-up visit with the new hire every month for the first few months to connect with them and see how they are doing. They were raised with parents who were very attentive to their 'specialness' and they expect the same from their boss. Take the time to listen to them — after all, their parents did."

Immediate Satisfaction: "Having technology and answers in the palm of your hand allows you immediate answers to life's questions. In discussing ergonomics, have a ready supply of devices, keyboard, mice, monitor stands that they can touch and try out. Most ergonomic equipment vendors will allow you a free trial period. Be sure to deliver on your promises and make sure your vendors are quick to respond to purchase orders."

What's new? "This tech-savvy group likes to try the newest, latest, and greatest devices. Keep abreast of what's coming out and the research behind it. The yearly National Ergonomics Conference has hundreds of ergonomics vendors that display the latest devices." ■

Flu Shot Rates Climbing for Healthcare Workers

Mandates and masks drive higher vaccination rates

Driven by mandates, vaccination-or-mask policies, reporting requirements, and other factors, healthcare worker flu immunization rates have risen 15.5% since the 2010-2011 season, the CDC reports.[1]

Overall, 79% of respondents reported having received an influenza vaccination during the 2015-2016 season, an impressive increase over time but only a relatively incremental improvement from the 77% coverage estimate in the 2014-2015 season. Still, the overall push continues, overcoming resistance by critics who question mandates for a seasonal vaccine that has only a 59% efficacy historically.[2]

Further complicating the CDC's annual message for immunization is that the live attenuated mist spray has been dropped this year for lack of efficacy, and last year's overall flu shot effectiveness was undermined by a mismatch with the circulating A strain.

"As far as efficacy, it's the best we have," said **Wilbur Chen**, MD, of the University of Maryland School of Medicine's Center for Vaccine Development. "A vaccine that is at least partially protective is better than no vaccination at all."

Chen spoke at a recent press conference on seasonal flu immunization at the National Foundation for Infectious Diseases (NFID) in Washington, DC.

Some clinicians and patients were taken aback by the CDC decision to drop the live attenuated influenza vaccine (LAIV) nasal spray as a recommended flu vaccine for the 2016-2017 season in the U.S. Citing declining efficacy that essentially bottomed out last flu season, the CDC did not recommend LAIV this year, though it will still be available in Canada.

Of course, the effectiveness of any flu vaccine may vary from year to year due to the vagaries of antigenic "drift" and the more dramatic "shift" of circulating influenza virus. In that regard, last year's vaccine had only a 41% efficacy against the predominate H1N1 influenza A strain and 55% against circulating B strains.[3] Given the negative view of vaccines by some members of the public, and the historical challenge to reach high flu immunization rates in healthcare workers, speakers at the NFID were reluctant to get mired down in discussions about vaccine efficacy or the lack thereof.

"Flu is unpredictable," **Tom Frieden**, MD, director of the CDC, said at the press conference. "We know there'll be a season, but when it is and which vaccines — which flu strain predominates — only time will tell. The safest thing you can do is to get vaccinated. And this vaccine does match the flu strains we've seen so far, but it's still too early to predict what the rest of the season will hold."

The three-component vaccines this year contain the following strains:

- A/California/7/2009 (H1N1)-pdm09-like virus,
- A/Hong Kong/4801/2014 (H3N2)-like virus, and
- B/Brisbane/60/2008-like virus (B/Victoria lineage).

Four component vaccines will include the three strains above, plus B/Phuket/3073/2013-like virus (B/Yamagata lineage).

Perhaps a more real-world measure of flu vaccine efficacy is reduced hospitalizations. The CDC estimates that some 200,000 people are hospitalized with flu infection annually in the U.S., and the number seems to be increasing as the population ages.[4]

"A 5% increase in the flu immunization rate nationally would prevent nearly 10,000 hospitalizations and about 800,000 illnesses," Frieden said.

HCW Rates

To estimate influenza vaccination coverage for the 2015-2016 influenza season, the CDC conducted an internet panel survey of 2,258 healthcare workers. Hospitals led the way with a 91% immunization rate, while healthcare workers in ambulatory care had an 80% rate, and those in long-term care settings were only at a 69% vaccination level. *(For more information, see related story, page 140.)* In percentages by job description, flu vaccination was highest among physicians (96%) and lowest among assistants and aides (64%).

There are several factors driving the trend of increasing immunization over time. For example, the Centers for Medicare & Medicaid Services has added impetus for immunization by requiring acute care hospitals to collect influenza vaccination coverage data for workers and report rates to the CDC's National Healthcare Safety Network. The biggest factor, however, appears to be mandated policies, as CDC reported that during the 2015-2016 influenza season, vaccination coverage was 96.5% among

healthcare personnel working in settings where the shot was required.

However, overall only 38% of healthcare workers surveyed were required to be vaccinated against influenza. Hospital mandates were in place for 61% of respondents. By occupation, 51% of physicians and 50% of nurses reported that they were immunized under a mandate. However, only 22.5% of assistants and aides reported influenza vaccination requirements.

Still, in contrast to the past struggles to get healthcare workers immunized, the field was framed as a success story at press conference.

"For [hospitals], more than nine out of 10 got vaccinated," Frieden said. "That's a steady increase. I can remember just a few years ago when that was down around 60%. Now, 96% of doctors got vaccinated."

Typically, mandated flu shot policies have a declination clause for those citing a medical or religious reason not to be vaccinated. According to a separate report[5] by the CDC, 11 states permit medical exemptions for vaccination requirements, four states permit religious exemptions, and 10 states permit philosophical exemptions.

Healthcare settings vary on how they handle these requests for exemption, with some allowing those not vaccinated to continue working if they wear a surgical mask during patient care activities. This is based on the concern that healthcare workers with early-stage, asymptomatic flu infection may transmit the virus to vulnerable patients. However, the approach has been also criticized for inducing a kind of stigma that increases pressure on healthcare workers to be vaccinated. Colorado, New York, and Rhode Island require hospital healthcare workers to wear surgical masks during flu season if they have been exempted from or declined vaccination, the CDC reports.

California state law requires employees to be offered vaccines free of charge and to sign a declination form if they choose not to be vaccinated. However, each local health department has the authority to issue requirements that apply to facilities within their jurisdiction only, which include — in some cases — that unvaccinated workers wear masks for patient care, the state health department clarified in response to an inquiry by *HEH*.

"Facilities must comply with a local health officer's order," the department said in an email. "In addition, some hospitals, clinics, and health systems have independently adopted vaccinate or mask policies for the healthcare workers in their facilities."

For example, the policy posted on the state health department website for Tuolumne County, CA, states: "HCWs who decline to receive a seasonal influenza vaccination will be required to wear a surgical mask while working in patient care areas during influenza season, between November 1 and March 31 each year. … In addition to protecting the wearer from transmitting the influenza virus, masking requirements have strongly and consistently raised vaccination rates among healthcare workers."

Another approach, taken at the University of North Carolina (UNC) Medical Center in Chapel Hill, is that any employee with fever — immunized for flu or not — cannot report to work.

"Our upper respiratory policy is that any employee with a fever can't come to work; they have to be out of work for 24 hours minimum and it could be several days," says **David Williams**, RN, of UNC occupational health. "They have to be fever-free for 24 hours to come back to work."

In addition, if healthcare workers have upper respiratory-type symptoms of runny nose or cough, they have to wear a mask to go into patient care areas, he tells *HEH*.

"If they have symptoms that cannot be contained by a mask, they have to stay out of work," he adds. "That is our general policy that applies to those with and without flu vaccination."

The CDC survey[1] found that, in the absence of mandated policies, flu immunization rates were highest (83%) for those workers in settings where vaccination was encouraged and available at the worksite at no cost for at least one day.

In contrast, only 45% of healthcare workers were vaccinated at sites where flu shots were not required, encouraged, or offered on site. This type of environment was reported by 21% working in ambulatory care and 28% of healthcare workers in long-term care, the CDC reported.

There are various educational approaches to improve vaccination rates, many of which include busting the common myths that the vaccine is unsafe or actually causes flu.

'Might be dying'

Taking a different tack is **Terri Rebmann**, PhD, RN, CIC, FAPIC, professor of environmental and occupational health at Saint Louis (MO) University. At a recent talk in Nashville at the annual APIC conference, Rebmann cited her own severe flu infection as a cautionary tale, saying she tells healthcare workers to compare the possible mild side effects of the vaccine with a full-blown flu infection.

"I actually had the flu and I was like, 'oh my gosh, I think I might be dying,'" Rebmann said. "I had it for 10 days. I got it the year the vaccine coverage was really poor because the strains didn't match. It was awful, so I've become much more passionate when I talk about the side effects of the vaccine versus the actual symptoms of the flu."

Whereas some people can feel like they almost have a mild viral illness for a brief time after the flu shot, flu symptoms can be "extreme" in terms of high fever, sore throat, and severe body- and headaches, she said.

Frieden told a similar story at the NFID press conference, saying a CDC staff member had a severe flu infection last year.

"A young, healthy woman thought she was going to die," he said. "She was desperately ill, really scared, sicker than she'd been in her life. That was flu. Flu each year sends hundreds of thousands of people to the hospital. In a bad year, it kills up to 49,000 Americans, including the elderly, people with underlying conditions, and infants. Each year, we see 100 or more infants or children who die from flu. And when we've analyzed those infants, we've seen that about 90% didn't get vaccinated." ■

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Many HCWs in Long-Term Care Skip Flu Shots

But progress over time is being made

Immunization rates for healthcare workers in long-term care were at a meager 69% last flu season — and that was an improvement.

During the previous 2014-2015 flu season, 64% of healthcare workers in long-term care were immunized, according to the CDC.[1]

Though they work with vulnerable elderly residents, long-term care workers have historically been less likely to be vaccinated for flu as their counterparts in hospitals and other settings. Though a lagging indicator, flu vaccination rates in long-term care employees are improving over time just like other sectors of the healthcare continuum. Flu vaccination of long-term care workers has improved by 17% since the 2011-2012 season, the CDC reported. Still, a study[2] published last year found that long-term care workers had lingering concerns about the safety of the vaccine, including the old myth that it could cause the flu.

"All the injectable vaccines are killed vaccines purified so that you cannot get flu," said **Wilbur Chen**, MD, of the University of Maryland School of Medicine's Center for Vaccine Development. "It is possible for you to get an adverse reaction, but it is really just mild injection site reactions and maybe some pain, swelling, and some muscle tenderness that really is very mild and lasts for a couple of days. But that's really the extent of it, so it's an extremely safe vaccine."

Chen spoke at a recent press conference on seasonal flu immunization at the National Foundation for Infectious Diseases (NFID) in Washington, DC.

Moreover, several studies have linked low immunization rates in long-term care workers with increased mortality in residents.[2-5] However, it must be noted that a 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.[6]

The problem in long-term care settings is compounded by the limited protective value of flu vaccine in elderly residents who may have a poor immune response, even after immunization. The elderly experience "immunosenescence," a decline in the body's ability to respond and fight off infection, Chen said. Similarly, they may not have a great post-vaccination bounce in immunity for flu, but the vaccine could lessen the severity of infections and prevent death.

"The impact of flu every year

hits the elderly the hardest," he said at the NFID meeting. "Seventy percent to 90% of influenza deaths every year occur in those 65 years and older. For hospitalizations, 50% to 70% due to flu occur in [this] population."

There is a new option for those over 65 this flu season: a vaccine containing an adjuvant designed to boost the immune response, he says. The CDC and FDA approved the adjuvant vaccine based on safety and efficacy results in other countries. There is also a high-dose vaccine, which contains four times the antigen level in the regular flu shot, available for those age 65 and over. The CDC does not recommend one over the other. ■

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Did Gloveless Contact Transmit Zika?

A strange case has implications for HCWs

Though employee health professionals are aware that Zika virus can be transmitted by a needlestick, a case involving transmission from a dying patient with an extremely high viral titer to an acquaintance caregiver has implications for protecting healthcare workers.

Most Zika infections are asymptomatic and inconsequential unless the infected person is pregnant or has had unprotected sex while the virus was circulating in the blood or persisting in a human reservoir like semen. Thus, we have seen tragic birth defects, failed or terminated pregnancies, transmission to sexual partners both male and female, and Zika infection following a needlestick.

But perhaps no case of Zika is as strange and alarming as that of the first U.S. death due to the emerging virus in June of this year in Salt Lake City. While hospitalized, the 73-year-old patient apparently transmitted Zika to a visiting acquaintance — possibly through tears — before dying with an incredibly high level of circulating virus in the blood. The secondary case developed symptomatic Zika infection, but subsequently recovered.

It is concerning, but not completely unexpected, that a patient could transmit a virus that was circulating in high titers in his system, but the level of virus was off the charts. At 200 million particles per milliliter, the Zika viral load in the patient was 100,000 times higher than what had been reported in other Zika cases, researchers recently reported.[1]

As a result, a previously healthy 38-year-old acquaintance of the index case — with no travel history or other Zika risk factors — acquired the virus after having wiped the index patient's watering eyes and helped a nurse reposition him in the bed.

"It is likely that Patient 2 acquired the infection from Patient 1, since Patient 2 had not traveled to an area in which Zika virus (ZIKV) is endemic in more than nine months and had not had sex with a partner who had traveled to such areas," investigators concluded. "Given the very high level of viremia in Patient 1, infectious levels of virus may have been present in sweat or tears, both of which Patient 2 contacted without gloves. Transmission of the infection through a mosquito bite appears to be unlikely, since *Aedes* species that are known to transmit ZIKV have not been detected in the Salt Lake City area. In addition, the

second case occurred 7 to 10 days after contact with the index patient in the hospital, which implicates direct contact during hospitalization. … No healthcare workers who had contact with Patient 1 reported having symptomatic illness."

There are many unresolved aspects to the case, perhaps none greater than the central question of why the patient developed such a high titer of Zika virus. A variety of host and viral possibilities are being considered, but there is no smoking gun clearly suggesting a mutation that would enhance Zika virulence or an underlying illness that made the man highly susceptible to escalating infection.

One intriguing theory is that treatment for prostate cancer opened the door for Zika to aggressively multiply in the man's system. Before traveling to Mexico, where he reported being bitten by mosquitoes, the patient had completed radiation therapy for prostate cancer and was still on antiandrogen or "hormone" therapy when hospitalized.

"[R]adiation therapy and androgen blockade may have played a role in enhancing ZIKV virus pathogenicity," the investigators note. "In that regard, it is of interest that ZIKV persists in seminal fluid after clearance of viremia and may reach levels exceeding those in blood, suggesting that cells in the male reproductive system may provide a milieu particularly suitable for ZIKV persistence and replication. It is possible that radiation therapy may have enhanced ZIKV replication in irradiated tissues, and this may be a suitable area for further research."

As of Oct. 19, 2016, the CDC reported 137 cases of Zika in the U.S. were locally acquired via mosquitoes; there were 3,878 travel-associated; 32 cases were sexually transmitted; and there was the one case via needlestick. Fourteen people in the U.S. infected with Zika have developed Guillain-Barré paralytic syndrome. The CDC reported 23 liveborn infants in the U.S. with Zika birth defects and five pregnancy losses due to Zika birth defects. ■

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1. Swaminathan S, Schlaberg R, Lewis J, et al. Correspondence: Fatal Zika Virus Infection with Secondary Nonsexual Transmission. *New Engl Jrl Med* 2016;Sept. 28:[Epub ahead of print].

OSHA Updates Guidelines on Occupational Safety

While the scope includes non-healthcare settings, employee health professionals should be aware of and encourage adoption of new guidelines by OSHA, titled: "Updated Recommended Practices to Encourage Workplace Safety and Health Programs." *(The guidelines can be found at: http://bit.ly/2dnfH3P.)*

"The recommendations update OSHA's 1989 guidelines to reflect changes in the economy, workplaces, and evolving safety and health issues," notes **Bobbi Jo Hurst**, BSN, RN, COHN-C, SGE, Region 4 Director of the Association for Occupational Health Professionals in Healthcare (AOHP). "The recommendations feature a new, easier-to-use format and should be particularly helpful to small- and medium-sized businesses."

Writing in the latest issue of the AOHP newsletter, Hurst said, "the programs are not prescriptive; they are built around a core set of business processes that can be implemented to suit a particular workplace in any industry. OSHA has seen them successfully implemented in manufacturing, construction, healthcare, technology, retail, services, higher education, and government."[1]

Key themes in the OSHA document include the following:

- leadership emphasizing safety and health as critical to business operations,
- worker participation in finding solutions, and
- using a systematic approach to find and correct hazards. ■

REFERENCE

1. Hurst BJ. OSHA Releases Updated Recommended Practices to Encourage Workplace Safety and Health Programs. Making a Difference AOHP Newsletter 2016:Oct:8

COMING IN FUTURE MONTHS

- Part 2 of our report on violence in healthcare
- Can training overcome respirator misuse?
- Will settlement with Ebola nurse change the PPE paradigm?
- The Americans with Disabilities Act and the HCW

HOSPITAL EMPLOYEE HEALTH

CE INSTRUCTIONS

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

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2. Log on to AHCMedia.com, then select "My Account" to take a post-test.
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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. **According to Lisa A. Pompeii, PhD, reports of violence in healthcare may be going into "solo databases" that include:**

   A. hospital security.
   B. employee health.
   C. nurse managers.
   D. all of the above.

2. **As healthcare demographics continue to shift, the older generation is giving way to a new wave of healthcare workers known for their life-long relationship with technology. This generation is called:**

   A. generation X.
   B. greatest generation.
   C. centennials.
   D. millennials.

3. **What is the estimated historical efficacy of the seasonal influenza vaccine?**

   A. 79%
   B. 69%
   C. 49%
   D. 59%

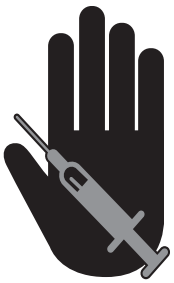
4. **According to Wilbur Chen, MD, what condition undermines flu vaccination response in the elderly?**

   A. Acute pulmonary syndrome
   B. Dementia
   C. Immunosenescence
   D. Vitamin D deficiency

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.



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