



# HOSPITAL EMPLOYEE HEALTH



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## INSIDE

OSHA steps in to protect healthcare workers from COVID-19 . . . . . 53

Good news for pregnant healthcare workers . . . 56

Needlestick risks at COVID-19 vaccination sites . . . . . 57

Social media fuels COVID-19 vaccine fears . . . . . 58

## Vaccinated HCWs Can Be Trusted Voice to Communities, Colleagues

*Healthcare workers reflect history of their communities*

*By Gary Evans, Medical Writer*

**H**ealthcare workers (HCWs) immunized against COVID-19 can be trusted voices to instill vaccine confidence in their colleagues

and communities, public health officials and clinicians emphasize.

“As a trusted messenger, remember that vaccine confidence begins with you,” said **Stephen Perez**, RN, PhD, of the COVID-19 response team at the Centers for Disease Control and Prevention (CDC). Perez spoke at a recent CDC

webinar on encouraging uptake of COVID-19 vaccines to an audience of clinicians and HCWs.

“It’s important to get a COVID-19

vaccine if you haven’t already done so,” he said. “The example you model in choosing to receive the vaccine is critical, as is your willingness to share

and celebrate that experience. The importance of your role in this cannot be overemphasized.”

Role-modeling of immunization also might encourage HCWs who are reluctant to take a vaccine. In a recent poll of 1,327 HCWs, 27% said they do not plan to take a COVID-19 vaccine, or have not yet decided. Breaking down the results, 17%

of the HCWs polled do not plan to take the vaccine, and 10% were undecided.<sup>1</sup>

The CDC recommended “identifying trusted leaders from various areas

**“THE EXAMPLE YOU MODEL IN CHOOSING TO RECEIVE THE VACCINE IS CRITICAL, AS IS YOUR WILLINGNESS TO SHARE AND CELEBRATE THAT EXPERIENCE.”**

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of the facility to serve as vaccine champions. These leaders should look like the healthcare personnel in your workforce. Ask them to lead by example by getting a COVID-19 vaccine and being photographed while doing so. Invite leaders to share with staff their personal reasons for getting vaccinated and the importance of vaccination.”<sup>2</sup>

Hold meetings and discussions where personnel at all levels — including food services and housekeeping — can provide input and ask questions. “These open discussions can help you address staff questions and concerns and get their input on how to best build vaccine confidence within your facility,” the CDC stated.

Perhaps the lowest level of vaccine confidence is among workers in long-term care, where almost two-thirds of healthcare workers in thousands of skilled nursing facilities have turned down the vaccine.<sup>3</sup>

“People feel like the vaccine was rushed, shortcuts were taken. They’re worried about long-term side effects,” said **David Gifford**, MD, MPH, senior vice president of quality and regulatory affairs at the American Health Care Association (AHCA).

These were the most common questions, but HCWs also expressed concerns based on misinformation that has spread along with the virus, said Gifford, who has been working with nursing homes nationally trying to increase vaccination rates.

“I try not to refer to them as conspiracy theories because that sort of sends a signal to the individual that their views and their information is [being] discredited in some way,” Gifford said at a recent CDC forum on empowering HCWs. “The decision that the staff are making based on the information they hear makes sense. The information they’re hearing is what doesn’t make sense.”

Drawing that distinction and listening carefully have proven key to successfully change HCWs’ minds, particularly if a trusted source delivers the information. If possible, ensure the information is personal and targeted to the individual, addressing their concerns in a nonjudgmental way.

“[With these measures], we have seen facilities with 75%, 85%, 90% vaccine uptake rates among the staff, while others are at 30% and 40%,” Gifford said. “A lot of the divide is around different type of belief issues and where people get their information — from families and friends.”

Successes should be celebrated by reminding all staff of the benefits of vaccination after someone is immunized.

“It’s not just about protecting you and protecting your family, which are two important messages,” he said. “It’s about protecting your residents. It’s about getting back to normal, being able to visit families, going out and doing the activities we have been all restricted from doing. I think those are messages that really resonated very well.”

## Fire Walkers

A recent poll of the general public revealed 24% say that will not take the vaccine.<sup>4</sup> Vaccinated HCWs are respected voices on immunization in their communities, as they have been through the fire.

“They are the first-line response, the people who have been working with patients suffering through COVID-19,” says **David Sanchez**, PhD, associate professor of pharmacy at Western University of Health Sciences in Pomona, CA. “They have seen firsthand what is

going on. They can encourage the public.”

Healthcare workers are rightly called heroes, and part of that can be taking a vaccine leadership role in their communities. “In some ways, I think it is our responsibility when we hit the community to be constantly educating people about the pros of the vaccine,” says **Anthony Harris**, MD, a hospital epidemiologist at the University of Maryland. “We need to be transparent about the side effects, but relay the basic message that the benefits far outweigh the negatives. [Tell them not to] jump the line, of course, but if you have a chance to get a vaccine, the best vaccine to get is the one you can get right now.”

In that sense, the new Johnson & Johnson/Janssen one-shot vaccine may have gotten a bit of a bad rap, a CDC official noted in the webinar. While its overall efficacy is lower than the 94%-95% range of the Moderna and Pfizer vaccines, it was trialed at a different time in the pandemic and faced more of the emerging variants, explained **Kathleen Dooling**, MD, MPH, co-lead of the COVID-19 Vaccines Work Group on the CDC’s Advisory Committee for Immunization Practices. The committee approved all three vaccines without expressing a preference for one over the other.

“The three vaccines, in fact, were not studied head to head and the results of the Janssen Phase III trial are not comparable with the mRNA vaccines,” she said. “That’s because the trial was conducted at a different calendar time, as well as different geography. Those both resulted in different circulating variants as well as higher background incidence of the virus.”

Phase III clinical outcomes for Janssen were observed from November 2020 to January 2021,

as opposed to September 2020 to October 2020 for the other two vaccines. The one-shot Janssen vaccine was tested in the United States, South Africa, Brazil, Chile, Colombia, Peru, and Argentina.

There were 173 symptomatic COVID-19 cases in the vaccinated group of 19,514 participants, with 509 in a similar size placebo group, Dooling said. That translates to an overall vaccine efficacy of 66%. The most common reactions were the same as the other vaccines — pain, redness, swelling at the injection site, and general fatigue and headache. Hospitalizations due to COVID-19 infections were rare, with two in the vaccinated group and 29 in the placebo participants. There were no COVID-19-associated deaths in the vaccinated group vs. eight in the placebo group in this trial.

“The [Janssen] vaccine efficacy against hospitalizations was 93%,” she said. “All the recommended vaccines have demonstrated high efficacy against severe COVID-19. With respect to hospitalization, there was an efficacy of more than 89% for all three vaccines.”

It is critical to remind patients they still need to take precautions to protect themselves and their families, including wearing masks and washing hands. However, the CDC has released guidance about what vaccinated people can do differently, which may help the hesitant reconsider the vaccine.

## Empathy

Perez stressed the importance of “strengthening the capacity of healthcare professionals to have empathetic vaccine conversations, to address myths and common questions, and to provide tailored

vaccine information to their patients.”

Speaking honestly about what one does not know also is important for building trust. “Patients will likely ask you if you’ve been vaccinated yourself,” Perez said. “If you have not, they might ask you why. Your response might have an impact on their own decision-making.”

People with high-risk medical conditions and allergies might be anxious or confused about vaccination. “When having these conversations, there are important evidence-based strategies you can use to make them more effective,” Perez said. “These include starting from a place of empathy and understanding. This pandemic has been stressful for many people, and the first step is to acknowledge the disruption COVID-19 has caused in all of our lives.”

Additionally, hesitancy may stem from feelings of mistrust in the medical establishment or the government due to mistreatment and collective or individual trauma. “[Be] sensitive to the longstanding health and social inequities faced by racial and ethnic minority groups and other groups experiencing health disparities,” Perez said. “Many people from these groups may also have a mistrust or fear in healthcare institutions or the government after experiencing very real trauma or mistreatment from these same institutions.”

HCWs of color are deeply influenced by their communities and their historic legacies, so they may experience vaccine hesitancy even in medical settings, said **Aletha Maybank**, MD, the chief health equity officer for the American Medical Association (AMA).

“When it comes to approaches for empowering healthcare personnel,

especially people of color, they don't escape the history or cultural concepts," Maybank said at the CDC forum. "We are human beings. I think overwhelmingly that people who are in positions of leadership really need to better understand that context — that healthcare workers are not separate from their own communities."

It is a good opportunity to explicitly engage employees in pandemic listening and planning sessions. For example, there is a perception that the pandemic response has valued speed over equity. "Urgency without that prioritization of equity really prevents us from having these conversations that we need to have with our healthcare workers and to learn from their real experiences with discrimination and racism, sexism, ableism, and xenophobia," Maybank said. "Oftentimes, in the context of urgency, we will see an excuse given to overlook the realities."

## The Horror

The national dialogue on immunizing people of color against COVID-19 has brought past atrocities to light, forcing a very uncomfortable conversation on the deep distrust engendered by government "medical care" like the infamous Tuskegee experiment.

"We have to understand that science has not always valued people," Maybank said. "It has not always been trustworthy, and has actually exploited [them]."

Begun in 1932, the Tuskegee experiment studied — then unethically ensured — the progression of syphilis in hundreds of poor Black men for 40 years. The Black sharecroppers enlisted

in the study were told they were receiving treatment for "bad blood," a catch-all diagnosis taken from the community vernacular.

In fact, they were followed for the progression of latent syphilis, a sexually transmitted disease caused by the bacteria *Treponema pallidum*. They were not told they had syphilis. Given the situation with COVID-19 vaccines, it should be emphasized the Tuskegee experiment was performed

THE GOAL SHOULD NOT BE TO "COERCE" COMMUNITIES OF COLOR TO BE IMMUNIZED, BUT ENSURE THEY CAN MAKE AN INFORMED DECISION ON THEIR OWN.

by researchers with the U.S. Public Health Service (PHS), which, at that time, was roughly equivalent to what we now call the CDC.

PHS researchers used Black community medical people and churches to perform grassroots recruitment for "free healthcare." In fact, they were essentially conducting a death watch to study the effects of untreated syphilis — even encouraging participants and families to agree to autopsies so they could study the bodies. A financial incentive that went toward burial services was offered to agree to autopsy.

That macabre detail was made worse by the refusal to treat the men with penicillin after it proved highly effective against syphilis in the late 1940s. Easily treated with antibiotics

in the early stage, syphilis can cause blindness, brain damage, and a host of other maladies if left untreated. The PHS researchers even convinced the Army not to draft any Tuskegee participants when penicillin was first administered to soldiers in WWII.

There was an attitude among PHS researchers that Black men did not merit ethical concerns as research subjects, with one saying in a 1976 interview that "the men's status did not warrant ethical debate. They were subjects, not patients; clinical material, not sick people."<sup>4</sup>

The experiment ended after it was exposed by the press in 1972. Although it led to public outrage, lawsuits, and widespread human research reform, Tuskegee's real legacy is the infamy of becoming "the longest nontherapeutic experiment on human beings in medical history."<sup>5</sup>

African Americans, even if they do not know all the details, know the pain and betrayal that resonates after Tuskegee. "They have the stories," Maybank said. "They have the trauma that's been passed down over generations. They have those experiences of discrimination and exclusion and harm from our institutions."

Considering this history, the goal should not be to "coerce" communities of color to be immunized, but ensure they can make an informed decision on their own. "People definitely have concerns. Healthcare workers and their patients have anxieties all around that," she said.

Speaking at the same forum was **Kimberly Manning**, MD, a self-described "vaccine champion" with the diversity, equity, and inclusion program at Emory University in Atlanta.

"In my lived experience, I think a lot of it starts with who we are," she said. "I'm a Black American woman,

a descendant of slavery, whose family is from Alabama. I attended two historically Black colleges, one of which is Tuskegee University. These conversations have been things that I have been hearing for my entire life.”

This background has enabled Manning to speak with credibility to communities of color. These social interactions became an opportunity to bring up the pandemic vaccines with a simple question: “How do you how you feel about the COVID vaccine?” she said.

“Not ‘Are you going to take it?’ or ‘You need to take it,’ but ‘How do you feel about the vaccine?’” she said. “What I found is that it is not one size fits all. Specifically, as it relates to Black Americans, there’s a lot of heterogeneity in why people

feel eager to get the vaccine and why [others] are not yet sure.”

In this way, Manning raises the vaccine profile, but is careful to humanize each individual and truly listen to what they say.

“[I’m] not doing the thing where you ask something and you’re plotting what you’re going to say next, but to really start this habit of listening and engaging in unique ways,” she said. “I think we can do that.” ■

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# OSHA Steps in to Protect Healthcare Workers from COVID-19

*But are infections mainly from the community?*

The Occupational Safety and Health Administration (OSHA) has issued a National Emphasis Program (NEP) to ensure employees in high-hazard industries like healthcare are protected from contracting SARS-CoV-2.

The NEP augments OSHA’s efforts to respond to COVID-19-related “complaints, referrals, and severe incident reports by adding a component to target specific high-hazard industries or activities where this hazard is prevalent.” OSHA also is providing whistleblower protections to ensure workers who report unsafe conditions are protected from retaliation.<sup>1</sup>

“Particular attention for on-site inspections will be given to

workplaces with a higher potential for COVID-19 exposures, such as hospitals, assisted living, nursing homes, and other healthcare and emergency response providers treating patients with COVID-19, as well as workplaces with high numbers of COVID-19-related complaints or known COVID-19 cases,” OSHA stated. “These include, but may not be limited to, correctional facilities, and workplaces in critical industries located in communities with increasing rates of COVID-19 transmission, and where workers are in close proximity.”

According to the general inspection procedures outlined in the document, OSHA visits may be programmed or unprogrammed,

meaning inspectors could show up unannounced, particularly in response to a complaint or fatality.

“The [OSHA inspector] shall review the establishment’s injury and illness logs (OSHA 300 and OSHA 300A) for calendar years 2020 and 2021 to date to identify work-related cases of COVID-19,” according to the NEP. “[We] may choose to verify the employer’s assertions regarding workplace conditions or possible existence of worker exposures to SARS-CoV-2 by interviewing employee(s) at the site.”

The agency’s action is a direct response to a Jan. 21 executive order by President Biden to protect workers from COVID-19. It also raises the question of whether OSHA will

issue a temporary standard or pursue official rulemaking on infectious disease protections for workers.

## Community Acquisition

The somewhat controversial problem is that researchers are finding most of the COVID-19 infections in healthcare workers (HCWs) are acquired in the community.

Researchers conducted a cross-sectional study of 24,749 HCWs in three states, finding that contact with a known COVID-19 case in the community was the strongest risk factor associated infection. Also predictive of SARS-CoV-2 seropositivity was living in a ZIP code with higher prevalence of COVID-19. Remarkably, none of the assessed workplace factors were associated with seropositivity. But this was to some degree expected, as the hypothesis was that community exposure — not healthcare exposure — would be linked to seropositivity.<sup>2</sup>

“This cross-sectional study was conducted among volunteer [HCWs] at four large healthcare systems in three U.S. states,” the authors noted. “Sites shared de-identified data sets, including previously collected serology results, questionnaire results on community and workplace exposures at the time of serology, and three-digit residential ZIP code prefix of [HCWs].”

Cumulative incidence of COVID-19 per 10,000 in the community up to one week before serology testing ranged from 8.2 to 275.6. However, 81% of the HCWs reported no community contact with a person confirmed or suspected of having COVID-19. Seropositivity was 4.4% overall, representing 1,080 workers.

“In multivariable analysis, community COVID-19 contact and community COVID-19 cumulative incidence were associated with seropositivity,” the researchers concluded. “No assessed workplace factors were associated with seropositivity, including nurse job role, working in the emergency department, or workplace contact with patients with COVID-19.”

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Of significance, the CDC participated in the study, which was conducted at four sites in the CDC Prevention Epicenters Program: Emory University in Atlanta, Rush University in Chicago, Johns Hopkins Medicine, and the University of Maryland Medical System. These academic institutions collaborate with each other and the CDC to perform cutting-edge infection prevention research, so they may have better compliance with PPE and other measures than, for example, small community and rural hospitals.

“In our study, there was no clear association between workplace contact with patients with COVID-19 and antibody positivity, consistent

with some studies<sup>3,4</sup> but conflicting with others,” they reported.

For example, researchers in seven hospitals in Denmark tested more than 25,000 healthcare workers and found an overall SARS-CoV-2 seropositivity rate of 3.4%. In contrast to the Epicenter study, the Danish researchers found a higher positivity rate among HCWs taking care of patients or working in the emergency department.<sup>5</sup>

“However, similar to our study, a large study<sup>6</sup> of more than 40,000 [HCWs] in New York found no association between work location or direct patient care and seropositivity, but did not distinguish workplace and community exposures to individuals with known COVID-19,” the U.S. researchers noted.

## ‘That’s a Really Difficult Situation’

*Hospital Employee Health* asked study co-author **Anthony D. Harris, MD**, an epidemiologist at the University of Maryland, to comment on the study. The interview has been edited for length and clarity.

**HEH:** Your hypothesis was you would find the community as the prime source of infections. But were you surprised that no work factors were associated with seropositivity?

**Harris:** Yes, to be honest with you. You would think that reasonable hypothesis would be that healthcare workers who were exposed to patients with coronavirus or were working in higher-risk areas may have a slightly increased risk. But that’s why we think our results are really important. I’m a hospital epidemiologist, and our job is to protect healthcare workers. In the first three or four months [of the pandemic] when all of the stories were coming out that

healthcare workers were seropositive, it was really scary. We were constantly modifying policies to protect the healthcare workers. I think what this study shows, at least in these academic centers, is that we probably had pretty good compliance with the things we know that matter — masks, eye coverings, and so on.

**HEH:** You thoroughly reviewed these findings?

**Harris:** The results were pretty robust. We had very strong epidemiological and statistical teams and a large number of healthcare workers. There was nothing to suggest that different aspects of the hospital were putting them at increased risk. We double- and triple-checked all the community findings with different [methods]. The healthcare workers who were getting it were driving in their cars unmasked with other healthcare workers, or they were letting their guard down at home — understandably. These results are really important to get out there, to alleviate the anxiety of healthcare workers with the basic message to keep doing what you're doing and follow all of the guidance. In some ways, you are safer in the hospital than you are outside.

**HEH:** PPE use early on was not ideal, but that changed as the pandemic continued.

**Harris:** It's a good point. Early on when there were massive PPE shortages — our healthcare workers were wearing surgical masks [instead of] N95s — I think that's when problems were arising. A limitation of our study that we did acknowledge is that these policies in the participating facilities were changing throughout. It was really hard to tease out things [and conclude] “universal masking is what led to this,” or “proper compliance with N95s.” We couldn't really tease out what worked and what didn't. We could just say at these

institutions that prioritized following the CDC guidance, we have fairly robust infection prevention practices. We did a lot of education and a lot of compliance monitoring. In these type of settings, healthcare workers were safe.

**HEH:** What are the implications for your study in situations where an HCW might think their COVID-19 infection was occupational? They could be eligible for workers' compensation or benefits.

**Harris:** That's a really difficult situation to comment on. That's always the question, whether it is a healthcare worker or a patient: Where, exactly, did they get it from? Healthcare workers are not bubbled in the hospital. It's really difficult to tell. From a similar point of view, if a patient gets it four days [after hospitalization], did they get it in the hospital? Did they come in with it? It's hard to pinpoint.

Obviously, our goal and hope in our policies is that we protect healthcare workers in the hospital. If what we provide for them in the hospital — the PPE and the education — they then apply outside the hospital, that keeps them safer. But it's really difficult to pinpoint definitively where a healthcare worker became infected.

I can tell you anecdotally that the hospital epidemiologists felt that in most of the outbreak situations, if healthcare workers were positive, it was often because of things like letting their guard down. We imply it [in the paper], but it is draining to wear PPE all the time. You assume among your colleagues that you are safe in instances like carpooling together without masks, or going into break rooms and sharing meals. We think that behavior leads to some seropositives. Now, there are cases with genetic sequencing where

it looks like a healthcare worker, despite being fully masked and at least reporting full compliance, got it from a patient. There are instances of rare events where that might happen, but I think what our data show across 25,000 healthcare workers is that those are the exceptions and not the rule. ■

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# Good News for Pregnant Healthcare Workers

*Preliminary CDC data look favorable for vaccination*

**P**regnant healthcare workers face a personal choice to receive a COVID-19 vaccine, although emerging evidence suggests contracting the virus outweighs the risk of immunization.

The CDC recommends lactating women can be vaccinated. However, the effects of the vaccines on pregnancy are unknown, though emerging trends look good.

“Pregnant people may choose to receive a COVID-19 vaccine. A conversation between the patient and their clinical team may assist with decisions about the use of a COVID-19 vaccine, though a conversation with a healthcare provider is not required before vaccination,” the CDC explained. “When making a decision, pregnant people and their healthcare providers should consider the level of COVID-19 community transmission, the patient’s personal risk of contracting COVID-19, the risks of COVID-19 to the patient and potential risks to the fetus, the efficacy of the vaccine, the side effects of the vaccine, and the limited data about the vaccine during pregnancy.”<sup>1</sup>

## High Risk of Bad Outcomes

Contracting COVID-19 while pregnant is associated with bad outcomes. A recent study found case fatality rates in pregnant patients infected with SARS-CoV-2 were 13.6 times higher than similarly aged non-pregnant women with COVID-19.<sup>2</sup>

**Tom Shimabukuro**, MD, MPH, MBA, CDC Vaccine Safety Team

Lead, reviewed pregnancy data at a recent CDC webinar. There were 30,000 self-reported pregnancies in a CDC vaccine safety system called V-Safe as of mid-February. The side effects seen in many vaccine recipients — sore arm, fatigue, mild fever — were no different in pregnant and nonpregnant women. This was seen in comparison of those who took the Pfizer or the Moderna vaccine.<sup>3</sup>

“If you look at pregnant women compared to nonpregnant women, it looks like there may even be a little less reactogenicity reported in pregnant women compared to nonpregnant women,” Shimabukuro said.

The CDC compared adverse pregnancy outcomes in 1,800 vaccinated women in the V-Safe pregnancy registry vs. unvaccinated pregnant women in the general population. The CDC studied miscarriage, stillbirth, gestational diabetes, pre-eclampsia or gestational hypertension, eclampsia, intrauterine growth restriction, and other outcomes.

In example results, the background rate for miscarriages in less than 20 weeks was 26%, compared to 15% in the V-Safe group. At 15%, pre-eclampsia in the V-Safe group was at the top of the background rate of 10%-15%. Stillbirth rates were 0.6% background, and less than 1% in the V-Safe. Gestational diabetes was 7%-14% background and 10% in the V-Safe group. Overall, the outcomes were similar in both groups.

“The take-home message here is that the rates of these outcomes in the V-Safe pregnancy registry are similar to background rates in general,” Shimabukuro said. “This should be

reassuring information for pregnant women who have questions about getting vaccinated.”

Shimabukuro was asked whether pregnant women should take the vaccine. “I’ll give you my opinion,” he said. “I think one of the messages is that there is evidence that pregnant women are at increased risk for complications from COVID infection and increased risk for more severe disease. There is also some evidence that COVID infection may increase the risk of certain pregnancy and birth outcomes. In order to protect both the mother and the developing baby, I think it’s important that women get vaccinated. If they have specific concerns or general concerns, I think their healthcare provider should be the first person that they speak to, to get advice about vaccination.” ■

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# Needlestick Risks at COVID-19 Vaccination Sites

Create prevention plans, be ready to call PEP hotline

Needlesticks are threatening to move beyond the hospital in a big way. With a variety of people with various skill sets administering COVID-19 vaccines — sometimes in unusual situations — there is understandable concern about sharps injuries at immunization sites.

As COVID-19 vaccine guidelines expand to more age groups and populations, occupational health experts are reminding HCWs that needlesticks could lead to transmission of bloodborne pathogens. For example, the CDC estimates there are 2.5 million with hepatitis C virus (HCV) — and half of them are unaware.<sup>1</sup> In addition, 1 million people are living with HIV in the United States, but 14% are unaware of their infection and are unlikely to be taking viral-suppressing drugs.<sup>2</sup> Bloodborne diseases in general have been exacerbated by the national opioid epidemic.

“Since hepatitis C, HIV, and co-infection with both are quite prevalent in the U.S., it is important to remain diligent about not compromising occupational health and safety for the benefit of public health, and vice versa,” says **Amber Mitchell**, DrPH, MPH, CPH, director of International

Safety Center Exposure Prevention Information Network (EPINet). This includes using devices with sharps injury prevention features that are appropriate for drawing up vaccine doses, with a sharps container nearby that is immediately accessible after use.

“These devices, according to compliance with the OSHA Bloodborne Pathogens Standard, need to be identified, evaluated, and selected by nonmanagerial employees responsible for administering vaccines in any setting where COVID-19 vaccination clinics are being administered,” Mitchell tells *Hospital Employee Health*.

There is no tracking system for needlesticks at COVID-19 vaccination sites. As national officials raise awareness, it will be up to local administrators to set up reporting systems for their vaccinators.

“Given the unprecedented effort to conduct a nationwide vaccination effort, it is important that we share as widely as possible information to help protect healthcare workers from needlestick injuries,” says **Ahmed Gomaa**, MD, a medical officer at the National Institute of Occupational Safety and Health (NIOSH).

If a needlestick occurs, time is of

the essence. NIOSH recommends calling the calling post-exposure prophylaxis (PEP) hotline at (888) 448-4911 immediately for guidance on treating exposures. Ideally, PEP should begin within two hours of the injury.

“In this situation, source testing will be difficult, and protocols should be developed in an exposure control plan for every site according to the OSHA Bloodborne Pathogens Standard,” Gomaa says. “There is no mandate to test the source patient. If the patient is known to have hepatitis B virus (HBV), HCV, or HIV, the worker should be assessed by a healthcare provider for care.”

## A Fivefold Increase in Needlesticks

NIOSH is developing additional materials that address sharps disposal for vaccination sites. “Other federal health agencies also have created educational materials to increase awareness about the risk of needlestick injuries at COVID-19 vaccination sites,” Gomaa tells *Hospital Employee Health*. “It is important that this information is shared widely with the workers

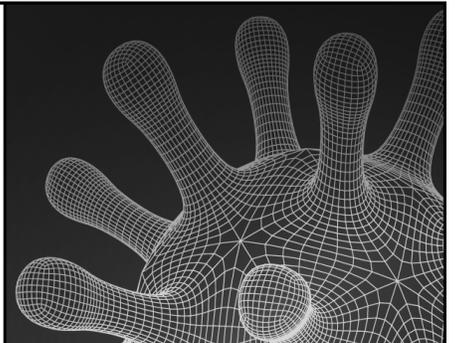
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and employers at the frontlines of delivering vaccines.”

For example, the National Institute of Environmental Health Sciences (NIEHS) created a fact sheet that gives more information about mass vaccination safety. The NIEHS cites a study that revealed needlesticks were five times greater at a 2009 pandemic influenza mass vaccination site than would normally be expected.<sup>3</sup>

The highest rate of needlesticks was in inexperienced vaccinators, the researchers reported, with these likely contributing to the injuries:

- distraction, including crowding and loud noises;
- difficulty uncapping or recapping the needle;
- lack of an ideal setting;
- patient movement;
- inappropriate technique;
- selecting an inappropriate needle size or type;
- needles lack sharps injury prevention features;
- disposing of needles improperly, or placing used syringe on a surface;

- fatigue after administering vaccines for seven consecutive days.

In a recent blog post, NIOSH recommended COVID-19 vaccination sites record “near misses” so prevention efforts can be improved.<sup>4</sup>

“An example of a near-miss is when the syringe’s safety device failed to activate but no needle stick happened,” Gomaa says. “This potential risk should be reported to prevent a similar future failure that results in a needlestick.”

Other safety measures recommended by NIOSH at vaccine sites include:

- wearing all recommended COVID-19 PPE;
- not recapping syringes without safety devices;
- not passing an uncapped needle (or needle without engaged safety device) to other HCWs;
- not passing medical supplies to other HCWs while handling exposed needles;
- notifying site supervisors of needlestick hazards or safety concerns;

- using needles with built-in sharps injury protections;

- avoiding recapping, shearing, or disassembling syringes;

- immediately disposing of contaminated sharps in a sharps container placed at arm’s length at a convenient height. ■

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# Social Media Fuels COVID-19 Vaccine Fear

*Misinformation guide may help clear a thicket of falsehoods*

Someone recently tweeted the following, in an apparent effort to undermine the current national vaccination campaign: “If you’re still alive 10 years from now, you’ll hear commercials saying, ‘If you took the #CoronaVirus #COVID19 #vaccine Syringe between 2020-21, you may be entitled to compensation.’”

**David Sanchez**, PhD, associate professor of pharmacy at Western University of Health Sciences in Pomona, CA, has been following such tweets, but recommends not getting

into a point-counterpoint discussion with people on social media.

“I’m on social media as much as anybody and I see this misinformation,” he tells *Hospital Employee Health*. “It’s really hard not to feel that obligation to defend each topic. It’s a balance though, because most of time these people don’t have enough knowledge or have enough background to have a good debate. Really, social media is the worst place to try and do that. We have to tell people to look for the answers

yourself — don’t rely on somebody’s random media post.”

While there are rare infection breakthroughs with any vaccine, most COVID-19 vaccine recipients are not contracting the pandemic virus and are beyond any short-term side effects.

“When the vaccines were first introduced, we saw a lot of disinformation about side effects — you are going to have this, you are going to have that,” Sanchez says. “I think over the last few months those

numbers of social media posts are going down. I think it is because people are seeing all their friends and colleagues getting the vaccine and nothing [adverse] happens.”

However, the anti-vaccine messages will no doubt continue, as there was a well-established movement against immunizations before the pandemic hit last year.

Here is what Children’s Hospital of Philadelphia (CHOP) said about projecting an adverse outcome for COVID-19 immunization into the future: “While the rules of science do not allow scientists to say that long-term effects can never happen, the evidence is strong that mRNA vaccines will not cause long-term harm.”<sup>1</sup>

Looking at all vaccines, “when [adverse] events occurred, the onset was within eight weeks of receipt of the vaccine,” CHOP officials noted. “While concerns about long-term effects of vaccines are legitimate, it is important to be aware that the organized antivaccine industry has targeted this issue as a way to sow doubt and confusion about COVID-19 vaccines.”

To fight this, public health agencies and academic partners have created a vaccine misinformation field guide outlining how to respond to the misinformation that is undermining uptake of the COVID-19 vaccines.

“The novel SARS-CoV-2 virus has triggered two parallel pandemics: a biological one, which has spread to every country in the world, and a social pandemic of misinformation and disinformation — an ‘infodemic’ — spreading across social networks,” according to the guide. “Vaccines have been sucked into this vortex of confusing information, which ranges from the innocently misleading to the intentionally deceiving. Vaccine-critical messaging increased more than twofold compared to pre-COVID-19 levels, with 4.5 billion views of content spreading vaccine misinformation in just the United States alone between March-July 2020.”<sup>2</sup>

The guide was created by a collaboration that includes UNICEF and the Yale Institute for Global Health. According to the guide, misinformation is “false information that’s shared by people who don’t realize it is false and don’t mean any harm, including vaccine proponents.” This is in contrast to disinformation, which “is deliberately engineered and disseminated false information with malicious intent or to serve agendas.”

People can be surprisingly vulnerable to misinformation, especially in times of upheaval. “[This is] due to a complex mix of cognitive, social, and algorithmic biases,” the guide authors wrote. “These include information overload and limited

attention spans, various cognitive biases, the novelty of misinformation, trust, and algorithmic popularity.”

Another factor fueling misinformation includes decreased trust in scientists and journalists. Conspiracies appear to help people reduce the complexity of reality and abate feelings of powerlessness and mistrust.

“People may be exposed to misinformation through media or voiced opinions and rumors, and more and more through online social networks, which fuel the infodemic,” the authors noted. “By amplifying attention-grabbing information, social media algorithms may incentivize the circulation of misinformation and disinformation, allowing false information to spread faster and further than true information.”

The guide takes the reader through stages, with chapters on preparation, listening, understanding, and engagement. ■

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## CE QUESTIONS

- 1. In a poll of 1,327 healthcare workers, what percentage said they do not plan to take the COVID 19 vaccine or have not yet decided?**
  - a. 15%
  - b. 27%
  - c. 39%
  - d. 48%
- 2. Kathleen Dooling, MD, MPH, said the Advisory Committee on Immunization Practices approved all three vaccines in the United States, but expressed a statically significant preference for:**
  - a. Moderna.
  - b. Janssen.
  - c. Pfizer.
  - d. none.
- 3. According to the National Institute for Occupational Safety and Health, post-exposure prophylaxis following**
  - a. a needlestick should be given within:
    - a. 8 hours.
    - b. 24 hours.
    - c. 2 hours.
    - d. 4 hours.
- 4. The CDC compared adverse pregnancy outcomes in 1,800 vaccinated women in the V-Safe pregnancy registry vs. unvaccinated pregnant women in the general population. They found:**
  - a. the outcomes were similar in both groups.
  - b. the V-Safe group experienced far fewer adverse events by almost all measures.
  - c. the background rate for miscarriages in less than 20 weeks was almost half that found in the V-Safe group.
  - d. stillbirth rates were inexplicably high in both groups.

## 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 healthcare 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.