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COVID-19 Vaccine Imminent, but No Magic Bullet Expected

By Gary Evans, Medical Writer

As the continuing global pandemic threatens to overwhelm the medical response, there are tempered expectations about an imminent SARS-CoV-2 vaccine to protect the battered healthcare workforce.

Immunization with a safe and effective vaccine could give mental health benefits as well as biological protection, as healthcare personnel work daily in the fear of some unforeseen exposure to COVID-19.

The Food and Drug Administration (FDA) is not expecting a magic bullet, saying it would accept a vaccine with 50% efficacy as long as they are confident it would be no lower than 30% effective. Given that and other factors, there is emerging epidemiological consensus the virus will

not be vanquished easily, and may even become globally endemic. Addressing the widespread public mistrust in the vaccine development at “warp speed,” an immunization expert and FDA advisor said pressures political

and otherwise to rush the process will not undermine stringent review for safety and efficacy.

“There has been so much attention on that fear that I just don’t think it’s going to happen,” **Paul Offit**, MD, said recently at the IDWeek 2020 infectious disease conference. “I am optimistic that there are things in place now be-

tween the data safety monitoring boards and the FDA Vaccine Advisory committee that it’s not going to happen.”

Offit is director of the Vaccine Education Center and an infectious disease physician at Children’s Hospital of

THERE IS EMERGING EPIDEMIOLOGICAL CONSENSUS THE VIRUS WILL NOT BE VANQUISHED EASILY, AND MAY EVEN BECOME GLOBALLY ENDEMIC.

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Philadelphia. “I am a member of the FDA’s Vaccine Advisory Committee as well as the data safety monitoring board,” he said. “Both [boards] are composed of people who are academicians, clinicians, and researchers. These people are not associated with the government or the pharmaceutical industry. I think they will give a clear, unvarnished, honest opinion of what they think about these vaccines. I really don’t think that a vaccine that is inadequately tested for safety and efficacy will be given to the American public.”

As *Hospital Employee Health* previously reported, healthcare workers have been designated by the CDC’s Advisory Committee on Immunization Practices (ACIP) as the first group to receive a safe and effective COVID-19 vaccine cleared for use in the United States.¹ About 10% of healthcare workers with COVID-19 develop serious infections, with outcomes including hospitalizations, intensive care, and death. Beyond the clinical consequences, healthcare workers report for duty knowing they may be endangering their own lives, and those of their families, colleagues, and patients.

Given this backdrop, *Hospital Employee Health* asked ACIP member **Grace Lee**, MD, MPH, a frontline pediatrician and professor at Stanford University, a hypothetical question: What would it mean to a healthcare worker to be immunized with a safe and effective COVID-19 vaccine?

“I feel it will be extremely helpful,” Lee says. “Our healthcare workforce is exhausted. The constant worry about COVID is just hanging over us as we are caring for patients and [interacting with] their family members. It’s going to be one really important strategy, and it will give us a sense of enhanced protection. It won’t take away the need for us

to continue to use PPE [personal protective equipment], but I feel like it will give me an extra layer of confidence that if I don’t do everything perfectly all of the time then I am putting myself and my family at risk. I think that is what gets exhausting. I was on clinical service last week and I have to tell you, I was exhausted by the end of the day. I couldn’t think.”

Razor’s Edge

PPE shortages and other healthcare delivery issues have exacerbated the situation, particularly in hot spots of community spread as demand for ICU beds increase. Under such conditions, the margin for error is razor thin.

“We cannot afford to lose more healthcare workers. We have to protect those on the frontlines of this battle,” said **Tom Frieden**, MD, MPH, former director of the Centers for Disease Control and Prevention (CDC). Delivering a keynote address at IDWeek 2020 on Oct. 22, Frieden said other diseases may arise if COVID-19 overwhelms the healthcare systems in third-world countries.

“Perhaps my biggest fear in this entire pandemic is that there will be millions of preventable deaths in Africa from measles, malaria, HIV, and tuberculosis,” he said. “We must protect healthcare, and we must use data to drive progress.”

That said, COVID-19 will not be driven out any time soon, and may never completely disappear, he emphasized.

“The reality is that even with a vaccine, we will be dealing with the risk of ongoing explosive cases and clusters,” Frieden said. “We are guardedly optimistic about

vaccination, and management and treatment is improving. We are learning more about prevention, but also we are not going back to the old normal.”

Indeed, medical history may eventually draw a line of demarcation of before COVID-19 emerged (BC), but we may remain in “during COVID” (DC) indefinitely, he added.

“I don’t think we see an after — a COVID AC,” Frieden said. “I don’t see this being eradicated anytime soon. Who knows, there could be drift in the genetic characteristics of it. We could figure out a way to find a low-variance, low-virulence strain to immunize people. We don’t know what the future will hold. What we do know is the cards we have to play today — and those cards are to knock down spread where it is spreading explosively and then work to control cases and clusters rapidly.”

One troubling sign is that the virus has been found in minks and other species, raising the possibility that coronavirus will eventually become endemic through an animal reservoir — much as the Middle East Respiratory Syndrome (MERS) coronavirus has done via camels in Saudi Arabia. In addition, vaccine-preventable viruses still emerge in cases and outbreaks because vaccines are not 100% effective and there are susceptible populations of unvaccinated people.

“The question is going to be, can we ever truly eradicate SARS-CoV-2 from the human population?” **Michael Ryan**, MD, MPH, director of the World Health Organization’s Health Emergencies Programme, asked at IDWeek. “That’s going to be a tough one. We have had effective vaccines against measles and yellow fever for decades and decades. We have [nearly] eradicated those

diseases, and they devastate children every single year.”

Rather than eradication, the goal should be reining in the virus with vaccines, therapies, and other public health measures, he added.

“If health systems can recover, maybe we can reach a point where this virus may enter the pantheon of all those viruses that can affect us from time to time, but we have the therapeutics and we absolutely have control over what it does to us,” Ryan said. “If we get there, I will consider that to be a public health success. Then, we will decide whether we can eradicate this disease or not.”

Permanent Change

As Albert Camus wrote, “though the plague had ended, we continued to live by its standards.”² In that vein, some of the changes made to accommodate COVID-19 are likely permanent for the foreseeable future.

“We have all realized that there are a lot of virtual meetings we can do that save airfare and are good for our carbon footprint, so why go back?” Frieden asked. “There are people who have realized, ‘We didn’t need that office space — we like working from home.’ We hope reimagining cities will make bicycling and walking more attractive and appealing, and will be helpful for our lungs and planet. Regardless what happens with COVID, there are changes that are going to be long term because we have realized that we were doing some things that could be done differently and better.”

In the divisive times of an election year, Frieden expressed hope that by this time next year people will realize they are connected for good or ill with others in a global village.

“Communities, families, individuals, may have an impact — positive

or negative — on anyone else in the world,” he said. “Interconnectivity has huge implications for our health and society — for our economic, educational, and environmental systems. Ultimately, the world is up against a common enemy. We weren’t invaded from outer space; we were invaded from the microbial world. That should call to our better natures, a better ability to collaborate, to think together, to be essentially one world in unison against the microbial world.”

Frieden reviewed a severity assessment framework of the 1918 H1N1 flu pandemic with COVID-19 superimposed by age groups.

“For those who are 70 or older who have underlying conditions, [COVID-19] is the 1918 pandemic,” he said. “For those 50-69, it is a moderately severe pandemic. For those who are 20-49, it’s behaving like a moderate-to-high-severity pandemic. For children, it’s behaving like a low-to-moderate severe pandemic. It’s a different pandemic in different populations.”

While these broad strokes show greater risk of mortality in countries with larger elderly populations, there is much that is not completely understood about this virus.

“We don’t really understand the epidemiology of transmission,” Frieden said. “We don’t know why [some] people get so much sicker than others. We don’t know whether mutations are associated with the severity or to what extent it’s driving these distances. We don’t know why women and children are less likely to get severe disease, nor do we know the optimum way to balance reducing spread with limiting economic damage.”

With the response already complicated by these unknowns, the virus has attacked chronically underfunded public health systems

and clinical care facilities designed to run with little surplus capacity.

“Our systems are not elastic,” Ryan said. “They are operating at 95% to 97% all the time. They find it very hard to expand and absorb extra work that may come in a shock wave. We have seen the effects of that with overcrowded emergency rooms, lack of ICU beds, lack of PPE. These are inevitable outcomes of a rigid and inelastic system that cannot move resources around when it needs to. It cannot expand quickly.”

Periodic lockdowns are a blunt weapon against a virus, but the greater problem is that many countries squandered the time gained by such severe measures, Ryan said.

“This is the opportunity we all lost, particularly in the Northern Hemisphere,” he said. “Many countries [locked down] and got this disease down to a low level. [But] did we invest in public health surveillance, hiring contract tracers, making our hospitals more resilient, educating our population, and building community resilience?”

The question was rhetorical, but the answer clearly is “no.”

“We didn’t do all of that homework, and now we are upset that what was predictable is happening?” Frieden added. “I mean, that is the reality. The countries that were able to crush the curve and not have a simmering, ongoing spread are able

to reopen without an explosion. In Europe and the U.S., we haven’t crushed the curve. There is a lot of [transmission] and we don’t know where it’s coming from. At best, we are diagnosing one out of five patients in the U.S., even though we are doing a million tests per day. The problem is, the more cases you have, the more tests you have to do. It is not a solution, it is part of a strategy. When we think about lockdowns we have to become more granular in how we consider this.”

In a larger sense, it is a “false dichotomy” as grocery stores and other essential services never completely shut down, Frieden said.

“It’s not about open vs. closed,” he explained. “For the foreseeable future masks are in and handshakes are out. We’re going to have to get used to that reality. The three Ws: Wear a mask, watch your distance, wash your hands. What we don’t know is how much of our society can you resume if you knock the levels down and take those kinds of measures. ‘Lockdown’ is a really bad term, but you take that action only to prepare your healthcare and public health systems.”

Despite unknowns like long-term effects and neurological complications, these basic measures to reduce COVID-19 transmission are not a mystery.

“We know that this virus can only reproduce effectively in the human

biologic system,” Ryan said. “It can only survive for a very short time outside that system. This disease moves from person to person. We can argue about how easily and exactly what circumstances are most efficient, but we know there are many circumstances, situations, and modes of transmission. We know how to break those. We know how to break the chains of transmission.”

For all its negative outcomes — including killing more than 1 million people worldwide as this report was filled — COVID-19 has shed a damning light on social injustice.

“It has been the great revealer,” Ryan said. “It has revealed issues with health justice, social justice, climate justice — God knows what else. The world is out of balance, our civilization is out of balance. Our children deserve a better world. I think we need to start moving forward. Not to a new normal; we need to move forward to a ‘better’ normal. We need to use COVID-19 as one of the lessons to move us toward a more sustainable and better normal in the future.” ■

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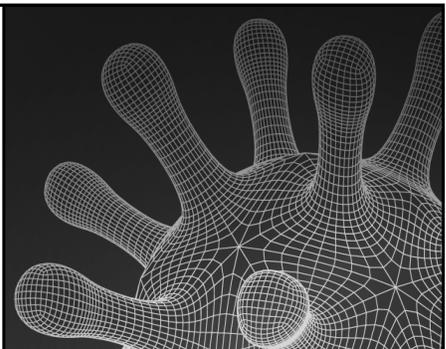
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The Key Question About COVID-19 Vaccines: Are They Safe?

The sheer size of the COVID-19 vaccine clinical trials will enhance prelicensure safety and efficacy evaluation. Many post-market evaluations are in development to bolster existing surveillance for adverse events, says **Grace Lee**, MD, MPH, a member of CDC's Advisory Committee on Immunization Practices (ACIP).

"The FDA typically advises a minimum population size of approximately 3,000 individuals for prelicensure assessments of vaccine safety," Lee and colleagues wrote in a recent paper. "In contrast, Phase III clinical trials for COVID-19 vaccines are enrolling or plan to enroll between 30,000 to 50,000 individuals each, providing the largest databases on prelicensure vaccine safety to date and an opportunity to better understand safety profiles within and across vaccine candidates prior to approval."¹

A pediatrician and professor at Stanford University, Lee also chairs the ACIP COVID-19 Vaccine Safety Technical Subgroup.

"These are some of the biggest trials we've seen," she says. "The reason for the size of these trials is really for the speed [of vaccine development], because they need to detect an efficacy signal of at least 50%, with a lower boundary of 30%. Because of the need for the high numbers, it actually is a great opportunity for vaccine safety."

Typical Phase III trials with a much smaller number of participants may take many years to parse these data, she notes.

"One way to gain [statistical] power is by following people for a long period of time," she says. "The

other way is to really focus on high numbers and make sure you are in areas where they are at a high risk of infection so they can challenge efficacy. It is an advantage for safety because, typically, we don't see trials of this size that capture safety data."

In the United States, eight vaccine candidates have received federal support under Operation Warp Speed, and four have entered Phase III trials.

"Vaccines will be critical for the prevention and control of COVID-19 in the U.S. and worldwide, yet these efforts cannot succeed without public confidence in a vaccination program," Lee and co-authors emphasized.

"Demonstrating vaccine efficacy and safety during clinical trials and implementing a robust post-licensure vaccine safety monitoring system as the vaccine is deployed in larger, more diverse populations is central to public confidence and enabling timely and accurate policy decisions for population-level use."¹

Although it was treated as a political victory over Trump administration pressure at the time, Lee questions if the FDA fell short in requiring submitted vaccine data to include a median of two months follow-up for a least 50% of the population

"I wish it were all of the population," she laments. "That means if you have 30,000 trial participants, 15,000 of them would have two months follow-up at a minimum."

Peter Marks, MD, PhD, director of the FDA's Center for Biologics Evaluation and Research (CBER), acknowledged the two-month period has also been questioned in a live-streamed interview. (*The interview is available at: <https://bit.ly/34COV2i>.*)

"While it would be nice to have [longer], we have to balance the safety we get up front with the need to try to save lives with the vaccine," Marks said. "We have a virus that is killing some 1,000 people a day in the [United States], so there is a balance there."

With healthcare workers designated by ACIP as the first group to receive COVID-19 vaccines, they will be the subject of active and passive surveillance systems to detect adverse events. One system that will be used is the CDC's National Healthcare Safety Network (NHSN), which primarily conducts surveillance for healthcare-associated infections in hospitals and long-term care facilities.

"NHSN routinely collects annual aggregate data on healthcare personnel influenza vaccination rates and is currently exploring the additional capture of COVID-19 vaccination rates," the authors noted. "Capabilities for enhanced monitoring of early COVID-19 vaccine recipients (e.g., essential workers) through smartphone or web-based surveys are also being developed to capture potential adverse events following vaccination."¹

While the larger vaccine trials will capture a lot of prelicensure safety data for short-term adverse events, "they won't speak to anything long-term," Lee says. "As each of these trials go on they will potentially be submitted to FDA at different time points so all of those data wouldn't be available immediately. But cumulatively, over time, we would start to see from the various vaccines what might come in."

Adverse events of special interest related to vaccines include allergic reactions, Guillain-Barré syndrome, transverse myelitis, myocarditis/pericarditis, vaccine-associated enhanced respiratory disease, and multisystem inflammatory syndrome in children. Vaccine safety systems include the longstanding Vaccine Adverse Event Reporting System (VAERS), which relies on clinicians, manufacturers, and public reports.

“VAERS is co-managed by the FDA and CDC and serves as an early warning system for potential safety signals that may be temporally related to vaccines,” the authors noted. “The rapid identification of an intussusception signal after widespread use of rotavirus vaccines in infants exemplifies the essential role of passive surveillance in the U.S.”¹

Active systems include the Vaccine Safety Datalink (VSD), a three-decade partnership between the CDC and nine healthcare systems. VSD collects healthcare encounter data and electronic medical records to capture vaccine outcomes in more than 11 million patients.

VSD uses “near real-time capabilities for signal detection, signal refinement, and signal evaluation. ... These well-established active safety surveillance systems form the foundation of monitoring COVID-19 vaccine safety,” the authors concluded.¹

Regardless, some level of risk is part of any medical intervention — and much of life, for that matter, Lee says.

“There is the question of benefits and risks to a population, and there

is the question of the benefits and risks to an individual,” she says. “You have to weigh the benefits and the risks to make sure, and you try to mitigate those risks as much as possible. We also see, for example, that there are vaccines that have local reactions and systemic reactions. For example, zoster vaccine can be quite reactogenic. A lot of people get pretty significant local side effects, like tender and swollen arms at the site of the injection, or some people get low-grade temps and myalgias.” ■

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The Age of Misinformation and Vaccine Hesitancy

Former CDC director: ‘Be first, be right, be credible’

Although he did not specifically throw his old agency under the bus, the former director of the Centers for Disease Control and Prevention (CDC) under the Obama administration described critical aspects of public health messaging that have been conspicuously lacking under current leadership.

“Communication is crucial. At CDC, your principles are be first, be right, be credible,” **Tom Frieden**, MD, MPH, former director of the CDC, said at the recent IDWeek 2020 infectious disease meeting. “It is so important to epidemic response. Tell people what you know and tell them how you know it. Tell them what you don’t know and what you will do to figure it out. Consistent, sincere, transparent. Give people

concrete, practical things to do to protect themselves, their families, and their communities.”

Under an unprecedented level of political pressure, the CDC has issued and recalled recommendations, sent out mixed messages, and seen its pandemic guidelines undermined and ignored by the Trump administration.

“I think we have to recognize that there are some things we can control and some we can’t control,” Frieden said. “We need clear communication. We need to be speaking regularly to the public day in and day out in plain language, transparently, telling them what we know and don’t know.”

In addition to a pandemic, we are living in an “infodemic,” **Michael Ryan**, MD, MPH, director of the Health Emergencies Programme at

the World Health Organization, said at IDWeek.

Part of the reason there is “this information and disinformation is [people] have had to face the pandemic with the sense of being on their own,” he said. “In fact, there is a sense of fatigue and in some cases hopelessness for the future in terms of what can be done to stop this virus.”

Going forward, public health officials need to publicly acknowledge the information gaps and challenges. “We have to get much better at filling those channels with good information,” Ryan said. “We need to work on our side to make it the place where people come to get information. The world has changed, and disinformation is part of that. We need to be aware and track

that. We don't need to be turning this into another combat between us and the bad people who put out the misinformation. A lot of that misinformation is genuinely held belief and therefore can't be countered by scolding and censoring."

Social and behavioral sciences can help understand these attitudes and beliefs. "It's not about who wins the information," Ryan said. "It's who wins the trust war, the behavioral war."

Engage people who have sincere doubts, "and then along with the social media companies, we need to isolate the clear malicious misinformation," Frieden said.

Vaccine 'Skeptics and Cynics'

Within this broader disinformation is specific distrust of the vaccines under development for COVID-19. There are essentially two groups historically: vaccine skeptics and antivaccine activists, said **Paul Offit**, MD, director of the Vaccine Education Center and an infectious disease physician at Children's Hospital of Philadelphia.

"Vaccine skeptics are people who are reasonably concerned that the speed with which we are developing this vaccine is unprecedented," Offit said at IDWeek. "We just had this virus in hand really in January and now within roughly a year we are going to have a vaccine. That's the fastest vaccine that has ever been made."

In addition, the messaging of doing something potentially dangerous at "warp speed," along with media descriptions of a "race to a vaccine," have "made people nervous," Offit said. "I do think we are going to have to explain these vaccines to people."

Antivaccine activists have adopted belief systems beyond science and reason, and therefore cannot be reached using them, he added.

"These people aren't skeptics — I think they are cynics," he said. "They just believe the pharmaceutical companies control everything and they are not going to believe anything you have to say."

In a move that threatens uptake of an eventual SARS-CoV-2 vaccine, the nation's antivaccine movement is framing an immunization refusal strategy based on civil rights arguments that likely will be underscored by conspiracy theories, says **David A. Broniatowski**, PhD, a professor of engineering and applied science at George Washington University.

Previously, Broniatowski published research on how Russian antivaccine bots and trolls were mobilized during the 2016 general election.¹ That paper was followed earlier this year by a study on how vaccine communications have been weaponized through identity politics.² His latest paper, an analysis of 204 Facebook pages of antivax groups, traces how a large measles outbreak at Disneyland in 2015 led to the emergence of a common antivaccine narrative, "emphasizing civil rights and freedom from elitist government vaccine opposition."³

"One of the things that is interesting about the COVID discourse online is that it really draws pretty heavily on what we've seen before in the antivaccine communities," Broniatowski says. "A lot of the things we are seeing around COVID — not just about a vaccine but wearing masks — are basically a page out of the antivaxer playbook."

Professionally produced films like *Vaxxed* and more recently, *Plandemic*, reinforce the conspiratorial attitudes of these groups, he adds.

"QAnon has been in the news

a lot recently," he says. "They have incorporated antivaccine tropes into their mythology — also chemtrails, antifuoride, flat Earth. Just about every conspiracy theory under the sun shows up in some form or another on QAnon. They don't necessarily care if the conspiracy theories are right or wrong — in many cases, they contradict each other. It allows the theory itself to spread and gives them something to hang their hat on."

When you are talking about opposing vaccination, you are fundamentally talking about issues of health freedom, especially in the civil liberties world, he explains.

"If you believe the government or somebody who is vaccinating is out to get you — if you believe some conspiracy theory like people are going to profit off of your poor health — you are more likely to refuse to be vaccinated," he said. "If you just leave it at it's your choice to vaccinate or not, [most people] think it's a good idea. You have to tell them it's their choice and give them why it is a good choice not to vaccinate. It's framed as freedom of choice, but the implicit assumption is vaccine is not the right choice." ■

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Emergency Physicians Are Suffering as COVID-19 Resurges

New ACEP survey framed by physician's suicide

Overwhelmed by the COVID-19 pandemic but fearing the stigma of seeking mental healthcare, emergency room physicians are at risk of burnout, moral injury, and suicide.

A new survey by the American College of Emergency Physicians (ACEP), conducted in October, revealed that 87% of emergency physicians say they are more stressed since the start of the COVID-19 pandemic. In addition, 72% report experiencing more professional burnout. (*More information is available at: <https://bit.ly/3oDv7BV>.*)

ACEP reported the results of a national sample of 862 emergency physicians at a recent press conference. The general results were framed by the story of Lorna Breen, MD, an emergency physician at NewYork-Presbyterian Allen Hospital in Manhattan, who died by suicide after contracting COVID-19. Breen contracted the pandemic virus treating patients as New York City was overwhelmed by the virus last spring. She stayed home while sick but returned to help her colleagues during a time when personal protective equipment (PPE) was in short supply and patients were in beds lining the hallways. Her sister, **Jennifer Breen Feist**, JD, told the following story, which has been edited for length and clarity, at the Oct. 26 ACEP press conference.

“Today is the sixth-month anniversary of my sister’s death. My sister died on April 26, 2020. My sister, Dr. Lorna Breen, treated patients with COVID-19 in New York until she got the virus herself. Lorna was always tough and smart,

and very active. She always wanted to be an emergency physician in Manhattan. For the first 49 years and six months of her life she showed no signs of depression or anxiety. That changed after she got COVID.

“In the time between when my sister got sick and her death — about five weeks — all she could think about was getting back to work. When she was home, she was on the phone all the time on attending, leading virtually, trying to find PPE, checking on her colleagues and other healthcare workers who were sick. [We] kept telling her about the airplane analogy of putting your oxygen mask over your own mouth before you take care of others, but my sister was just too focused on saving as many people as she could.

“With patients overflowing in the hallways, not enough PPE at the time, and minimal supplies — compared to the number of sick and dying patients — my sister rose to meet the challenges of COVID-19. We believe this ultimately cost her her life. We know that when she finally did seek mental health treatment, she was so concerned about that stigma of seeking mental health — so concerned about how she would be perceived by her peers. That was her main focus, and we believe, ultimately, it was her downfall.”

Written comments by respondents to the ACEP survey expressed similar concerns about the stigma of seeking mental healthcare:

- “I felt concerned that my job would be in jeopardy or others would question my ability to do my job.”

- “There are questions on medical license applications about if you’ve ever been treated for mental health. I don’t want to be perceived as unfit for duty.”

- “I do not want to get diagnosed with a mental health condition, then have to report it on job applications or medical licensing applications/renewals. I am afraid I would potentially lose my job, future job opportunities, license, and eligibility for disability insurance.”

- “In medical school, I avoided treatment as I believed it would affect residency applications, licensing eligibility, etc.”

- “I am concerned about reporting to state licensing boards and retaliatory actions taken by these boards.”

- “[I] would have to declare on reappointment, explain and risk potential limits on practice.”

- “I thought that if I sought treatment for ADHD/anxiety that it would make me a lesser candidate for emergency medicine positions.”

Bipartisan Bill in Congress

Feist is co-founder of the Dr. Lorna Breen Heroes’ Foundation, which is trying to raise awareness of this critical problem and pass federal legislation to address specific remedies. (*More information is available at: <https://bit.ly/3jAuKEz>.*) ACEP is one of the sponsors of the bipartisan bill, titled “The Dr. Lorna Breen Health Care Provider Protection Act (S. 4249; HR 8094).”

The bill calls for several actions, including:

- Establishing grants to train students, residents, or healthcare professionals (HCPs) in evidence-based techniques to reduce and prevent burnout, mental health conditions, suicide, and substance use disorders. These grants also would go toward improving well-being and job satisfaction.
- Identifying best practices to reduce and prevent burnout and suicide among HCPs, educating HCPs on these practices, and promoting mental and behavioral health and job satisfaction.
- Creating a national, evidence-based campaign to encourage HCPs to seek support and treatment

for mental and behavioral health concerns.

- Creating grants for employee education, peer support, and mental and behavioral health treatment, prioritizing HCPs in current or former COVID-19 hot spots.
- Conducting a comprehensive study on HCP mental and behavioral health and burnout, including the effects of the COVID-19 pandemic.

ACEP Survey Findings

The results of the survey revealed that four in five emergency physicians cite concerns about family, friends, and personal health, while three in five cite job or financial security concerns and lack of PPE.

“Despite the availability of services, nearly half (45%) of emergency physicians are not comfortable seeking mental health treatment,” ACEP reported. “The poll shows that stigma in the workplace (73%) and fear of professional reprisal (57%) are the primary barriers preventing emergency physicians from getting the mental healthcare they need. As a result, more than a quarter (27%) of emergency physicians have avoided seeking mental health treatment out of concern for their job. ... Only 5% reported there is ‘no stigma at all’ in their workplace.”

Female, older, and rural emergency physicians report the highest level of stigma in their workplace. ■

Flu Deaths in Children, Vaccination Hesitancy

NFID survey reveals flu vaccination reluctance amid pandemic

Although COVID-19 certainly has caused some infections and deaths in children, they generally have fared well against the virus compared to other age groups. Influenza, on the other hand, can cause severe disease in children.

“The 2019-2020 flu season was terrible for kids,” **Patricia Whitley-Williams**, MD, a pediatrician and president of the National Foundation for Infectious Diseases (NFID), said at a press conference. “There were 188 flu-related deaths reported in children to the CDC. This matches the record set in 2017-2018 for the highest number of pediatric flu deaths reported during a regular flu season. We also know that the number of pediatric deaths reported to the CDC each season is likely lower than the actual number.”

What is truly devastating is that

more than half of these children were healthy, with no pre-existing conditions, she added.

Flu vaccination is critical because it can reduce a child’s risk of death significantly, she said. For example, a six-year-old child was vaccinated three years ago. He developed a local reaction at the site and the parents forbade future vaccinations, she noted.

“The family members did not receive flu vaccine, either. Fast-forward to January of 2020 — this child is now nine years of age and has influenza A,” Whitley-Williams said. “He was subsequently admitted to the hospital and quickly developed a secondary bacterial pneumonia. Before you know it, he was in a life-threatening situation in our pediatric intensive care unit — all because of not getting a flu

vaccination. Thank God the child did recover and was vaccinated. I can tell you this was a learning lesson for that family. All of the family members got vaccinated.”

Despite heavy emphasis on seasonal influenza immunization during the ongoing pandemic, only 59% of U.S. adults said they will take the vaccine this year, according to an NFID survey.¹

Those not planning to be immunized for flu cited several reasons, including 17% who fear they might contract COVID-19 if they go out to get a flu shot. Other reasons were familiar antivaccine myths:

- 32% said they never get the flu;
- 29% are concerned about potential side effects from the vaccine;
- 22% are concerned about getting flu from the vaccine.¹

“We in the infectious disease community have been talking about a potential double-barreled respiratory virus season when flu and COVID-19 converge,” NFID Medical Director **William Schaffner**, MD, said at the same press conference. “There is a real risk that, even if we only have a moderate flu season, we could be in for a rough few months ahead.”

It will be an unusual flu immunization for healthcare workers as well, since those working from home will be difficult to reach through typical in-house campaigns.

“Our employee health teams had to come up with a plan to make sure individuals working virtually can get the vaccine,” says **Connie Steed**, MSN, RN, CIC, director of infection prevention and control at Prisma Health in Greenville, SC. “We have developed drive-throughs for flu vaccine that these employees can use, including giving them certain times of the day at every one of our locations.”

Although flu vaccine efficacy can vary year to year, Schaffner made the traditional argument that immunization could keep people out of the hospital or the morgue.

“Flu vaccines help prevent tens of thousands of hospitalizations each year and other serious complications, such as heart attack and stroke,” Schaffner said. “Even if you do get flu — despite getting vaccinated — you are likely to [experience] a less

severe and shorter illness. You are far less likely to get pneumonia or to be hospitalized, and you are less likely to die.”

The NFID survey revealed 46% of U.S. adults are worried about co-infection with flu and COVID-19. The fear of co-infections was cited by 28% as making them more likely to seek immunization for flu.

Complicating matters, the two respiratory diseases present the clinician with similar symptoms, except for possible loss of smell that can occur with COVID-19. The CDC has developed a new rapid test that can detect and differentiate both SARS-CoV-2 and influenza A and B.

Overall, the CDC estimates there were 38 million flu illnesses, 18 million flu-associated medical visits, 400,000 flu hospitalizations, and 22,000 flu deaths during the 2019-2020 season. In addition, the CDC estimates that flu vaccines prevented 7.5 million flu illnesses, 3.7 million flu-associated medical visits, 105,000 flu hospitalizations, and 6,300 flu deaths last season.²

The results of the NFID survey revealed Black (61%) and Hispanic adults (53%) are more likely to be worried about contracting both infections at the same time compared to white adults (39%). However, despite this concern, about 62% of Black adults said they are either unsure about getting the shot or will not get immunized this year.¹

“This disconnect is a big concern,” Whitley-Williams said. “Black adults are more worried about being infected with COVID-19 and flu at the same time — more so than their white counterparts. This makes sense. Black adults in the [United States] are more likely to be hospitalized and to die from COVID-19 as they are for flu.”

The survey results also showed that 39% of Blacks will not take an antiviral medication for flu, even if recommended by a healthcare provider. Explanatory factors include unconscious bias, institutional racism, and a warranted distrust of traditional medicine by at-risk populations.

Twenty-two percent of U.S. adults who are at high risk for flu-related complications (e.g., adults age 65 years and older and adults with diabetes, asthma, or heart disease) are not planning to seek vaccination this season. ■

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Is It Time for a Mask Mandate?

With COVID-19 surging nationally, there are increasing calls for a national mask mandate for the public. There appears to be sufficient evidence to support such a measure as we enter a winter of considerable discontent.

The political reality is a mask mandate is not likely to happen unless the Trump administration is voted out, as the president politicized the mask issue early in the pandemic and some see it as an issue of individual freedom than collective public health.

Although he has cautioned against such mandates in the past, National Institute of Allergy and Infectious Diseases Director Anthony Fauci, MD, recently made comments more open to the idea. Democratic presidential candidate Joe Biden has said a mask mandate will be a priority if he is elected.¹

'Low-Tech' Measures

Fauci recently co-authored a paper that said “multiple lines of evidence support the effectiveness of masks for the prevention of SARS-CoV-2 transmission. Mandates for the wearing of masks in public have been associated with a decline in the daily growth rate of COVID-19 cases in the U.S.”² The implementation

of such mandates averted more than 200,000 cases of COVID-19 by May 22, according to modeling estimates.³

Other “low-tech” measures in to prevent COVID-19 include wearing masks, physical distancing, hand hygiene, and limiting crowds and gatherings.

“If a vaccine has only moderate efficacy, or if vaccine uptake is low, these ... modalities will be even more critical,” Fauci and colleagues noted. “Wearing face coverings — masks — in the community setting to prevent the spread of SARS-CoV-2 is a key component of this combination approach.”²

The paper cited a study at a U.S. academic medical center, where infection rates fell after adoption of universal masking by all healthcare workers and patients. “The SARS-CoV-2 positivity rate among healthcare workers declined from 14.65% to 11.46%, with a decline of 0.49% per day,” they emphasized.⁴

The epidemiology of SARS-CoV-2 indicates most infections are likely spread through exposures within about six feet, but there is the risk of airborne spread over greater distance under certain conditions like poorly ventilated enclosed spaces.

“Blocking the dispersion of respiratory droplets from an individual

infected with SARS-CoV-2 via use of a mask that functions as a physical barrier is a logical strategy to curb transmission,” the authors concluded. “Since it has now become evident that individuals capable of transmitting SARS-CoV-2 cannot be identified solely by the presence of symptoms, universal mask-wearing in the community for source control is recommended.” ■

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CE QUESTIONS

- 1. SARS-CoV-2 has been found in minks and other species, raising the possibility that coronavirus will eventually become endemic through an animal reservoir much as the Middle East Respiratory Syndrome (MERS) has done in:**
 - a. chickens.
 - b. camels.
 - c. goats.
 - d. civet cats.
- 2. Tom Frieden, MD, reviewed a severity assessment framework of the 1918 H1N1 flu pandemic with COVID-19 superimposed by age groups. Which age group fell into "a moderately severe pandemic?"**
 - a. 70 years or older
 - b. 20 to 49 years
 - c. 50 to 69 years
 - d. 18 years and younger
- 3. Grace Lee, MD, MPH, said the large populations in U.S. clinical trials for a COVID-19 vaccine are primarily a reflection of the need for:**
 - a. safety data.
 - b. comparison between vaccines.
 - c. inclusion of minority populations.
 - d. speed of development.
- 4. Despite the availability of services, what percentage of emergency physicians said they were not comfortable seeking mental health treatment in an American College of Emergency Physicians survey?**
 - a. 27%
 - b. 33%
 - c. 45%
 - d. 60%

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.