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Winter of Our Discontent: Omicron Variant Pushes Healthcare to Brink

CDC revises guidelines to shorten HCW work furloughs

By Gary Evans, Medical Writer

A fierce viral storm of the COVID-19 omicron variant is hitting the United States

and is expected to worsen, creating a flood of patients while undermining healthcare staffing as personnel are furloughed after breakthrough infections.

In response, the Centers for Disease Control and Prevention (CDC) on Dec. 23 revamped its isolation guidelines for infected and exposed healthcare workers (HCWs), reducing the days they may miss work based on symptoms, testing, and other factors as defined in categories of

Traditional, Contingency, and Crisis.¹ (See the CDC's recommended work restrictions chart in this issue.)

With omicron causing much higher breakthrough infection rates than previous variants, there is concern infected HCWs must isolate amid an ongoing nursing shortage. The previous recommendation for 10 days has been changed to seven, and shorter than that under certain conditions.

"With the growing number of COVID-19 cases from the omicron variant, and consistent with current understanding of the disease

"WEAKENING COVID-19 GUIDANCE NOW, IN THE FACE OF WHAT COULD BE THE MOST DEVASTATING COVID-19 SURGE YET, WILL ONLY RESULT IN FURTHER TRANSMISSION, ILLNESS, AND DEATHS."

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trajectory, CDC [recommends that] healthcare workers with COVID-19 who are asymptomatic can return to work after seven days with a negative test, and that isolation time can be cut further if there are staffing shortages,” the agency said in a statement.² “Healthcare workers who have received all recommended COVID-19 vaccine doses, including a booster, do not need to quarantine at home following high-risk exposures.”

These updates provide healthcare facilities “with the strategies to limit the effects of staff shortages caused by COVID-19,” the CDC noted, indicating the decisions on isolation and quarantine of medical workers can be made based on the local situation.

Saying the CDC succumbed to pressure from hospital employers, the president of National Nurses United wrote a letter to the agency, stating “weakening COVID-19 guidance now, in the face of what could be the most devastating COVID-19 surge yet, will only result in further transmission, illness, and deaths.”³

The CDC also shortened isolation guidelines for infections in the general public, saying those without symptoms could return to work after five days and wear a mask for an additional five days.⁴ This is partly to address the widespread number of breakthrough infections with mild symptoms and less risk of transmission. But the measure was criticized because it did not require a negative test and it relied on an honor system that could be ignored. However, the CDC said most COVID-19 transmissions occur in a five-day window: the first two days before symptom onset and in the next three days thereafter.

These moves came as concession to a painful reality, that waves of

omicron could overwhelm healthcare delivery and business operations if too many people are isolated.

“Results from scenario analyses indicate that current increases in omicron cases are likely to lead to a national surge in the coming weeks with peak daily numbers of new infections that could exceed previous peaks; these scenarios may be realized as soon as January,” the CDC reported.⁵ (*Editor’s note: As of press time, omicron case rates had not peaked yet, although the CDC predicted this to happen sometime in January.*) “Projected large surges in cases indicate surges of hospital demand even if severity is reduced, because of the large number of anticipated cases occurring in a short period.”

Omicron has caused breakthrough infections in even fully vaccinated and boosted healthcare workers in the community. “It has the potential to hit the healthcare sector really hard,” says **Debra Furr-Holden**, PhD, an epidemiologist at Michigan State University. “Our healthcare system is already overburdened.”

Who Invited Omicron?

Furr-Holden speaks from personal experience. In November 2021, she attended a wedding in Milwaukee County, WI, that became one of the first reported omicron outbreaks in the United States. The epidemiologist and at least a dozen other people — including 11 healthcare workers from Oakland, CA — were infected.

“I didn’t know anybody else at the wedding but the bride,” Furr-Holden recalls. “[My infection] was confirmed as omicron. I have mild symptoms. I had received my two doses of vaccine and was scheduled to get the booster the following Thursday [after the wedding].”

The wedding protocol required COVID-19 testing before travel, which Furr-Holden did two days before attending. She experienced headache and sore throat two days after returning.

“The reception is where I think the outbreak happened — not at the actual wedding ceremony,” she says. “It was a social gathering. People came in with their masks on, and once the food was served, they took them off to eat. A lot of times, those masks don’t come back on as you continue eating cake, drinking, and dancing.”

The 11 healthcare workers are staff members at Kaiser Permanente’s Oakland Medical Center. A 12th case linked to the wedding resides in Berkeley, public health officials reported. The 11 healthcare workers, six of whom tested positive for omicron as this report was filed, ranged in age from 18 to 49 years.⁶

“All of the affected staffers were fully vaccinated and had received boosters,” says **Marc Brown** of Kaiser Permanente national media relations. “All spent the CDC-prescribed period of isolation at home, and all have been cleared to return to work.”

Several patient and co-worker contacts were tested and were all negative as of this report.

Additional evidence that even those fully vaccinated and boosted can be infected is in the first report of 43 U.S. cases of omicron the CDC analyzed.⁷ Only one was hospitalized and none died. However, 34 infections occurred in those who were fully immunized. Of those, 14 received additional booster doses, although five had received boosters recently and likely had not gained full immunity. This means nine of the first 43 cases in the United States occurred in people who were fully immunized and boosted. A study of 132 patients

in the United Kingdom hospitalized with omicron infections revealed 17 had received a booster dose.⁸

If those levels of breakthrough infections hit fully immunized and boosted healthcare workers, existing staffing woes will be compounded — despite shortened furlough periods.

There already is a critical shortage of emergency nurses, says **Christopher Kang**, MD, FACEP, president-elect of the American College of Emergency Physicians.

“Our nursing shortage is reverberating throughout the health system,” says Kang, an emergency physician for several hospitals in Washington state. “It is posing a lot of challenges in terms of patient access as well as slowing down the overall efficiency of care throughout the system.”

A Speeding Bullet with Less Severity?

Several other sociodemographic factors were converging before omicron, and now are coinciding with the emerging variant.

“As the pandemic continues, a lot of people have deferred or delayed their care,” Kang explains. “Those disease processes might emerge now in more advanced stages. Another [factor] is the pure volume of patients coming in, whether it is out of concern for having COVID, or actually having it, as well as regular emergencies — heart attacks, strokes, trauma injuries from car accidents. We are seeing wait times continue to increase. [Another] one is mental health, not only for providers but patients. Because of conditions and access to care [in the community], we are seeing an increasing number of mental health patients. We can’t accommodate and manage them efficiently.”

With omicron, it seems clear there is less margin for error to acquire initial infection. Estimates vary about how much more infectious it is than delta, which was at least twice as contagious as previous variants. An Israeli physician and public health advisor, justifying the need for a fourth shot (or a second booster) in that nation, said omicron is “10 times more contagious” than delta.⁹

The authors of a study submitted for publication in Hong Kong suggested a possible explanation of omicron’s transmissibility, noting the variant “infects and multiplies 70 times faster than the delta variant and original SARS-CoV-2 in human bronchus, which may explain why omicron may transmit faster between humans than previous variants.”¹⁰

As of Jan. 1, 2022, CDC genomic surveillance identified the omicron variant in 95% of U.S. cases, with the once-predominant delta variant falling to 5%.¹¹ This happened in a remarkably short span, as omicron represented less than 1% of genomic isolates on Dec. 4, 2021. As of Dec. 27, 2021, the CDC said 94% of U.S. counties were reporting high (85%) or substantial (9%) COVID-19 transmission.¹²

With case counts increasing daily, hospitalizations rose to more than 77,000 on Dec. 29.¹³ That represented a 14% increase in hospitalizations from two weeks prior, but deaths fell 7% in the same period. Although record case counts occurred over several days in this period, the daily average of about 1,200 deaths was well below the record mortality toll of more than 4,000 people in a single day in January 2021.

While finding the variant more contagious, the authors of the Hong Kong study also revealed lung infections with omicron are significantly lower, possibly

Recommended Work Restrictions for HCP Based on Vaccination Status and Type of Exposure

Exposure	Personal Protective Equipment (PPE) used	Work Restriction for HCP who have received all COVID-19 vaccine and booster doses as recommended by CDC	Work Restriction for HCP who have not received all COVID-19 vaccine and booster doses as recommended by CDC
<p>Higher-risk: HCP who had prolonged close contact with a patient, visitor, or HCP with confirmed SARS-CoV-2 infection</p>	<ul style="list-style-type: none"> • HCP not wearing a respirator (or if wearing a facemask, the person with SARS-CoV-2 infection was not wearing a cloth mask or facemask) • HCP not wearing eye protection if the person with SARS-CoV-2 infection was not wearing a cloth mask or face mask • HCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure 	<ul style="list-style-type: none"> • In general, no work restrictions. • Perform SARS-CoV-2 testing immediately (but generally not earlier than 24 hours after the exposure) and, if negative, again 5-7 days after the exposure. • Follow all recommended infection prevention and control practices, including wearing well-fitting source control, monitoring themselves for fever or symptoms consistent with COVID-19, and not reporting to work when ill or if testing positive for SARS-CoV-2 infection. • Any HCP who develop fever or symptoms consistent with COVID-19 should immediately self-isolate and contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing. 	<p>Option 1:</p> <ul style="list-style-type: none"> • Exclude from work. HCP can return to work after day 7 following the exposure (day 0) if a viral test is negative for SARS-CoV-2 and HCP do not develop symptoms. The specimen should be collected and tested within 48 hours before the time of planned return to work (e.g., in anticipation of testing delays). <p>Option 2:</p> <ul style="list-style-type: none"> • Exclude from work. HCP can return to work after day 10 following the exposure (day 0) if they do not develop symptoms. Although the residual risk of infection is low, healthcare facilities could consider testing for SARS-CoV-2 within 48 hours before the time of planned return. <p>In addition to options above:</p> <ul style="list-style-type: none"> • Follow all recommended infection prevention and control practices, including wearing well-fitting source control, monitoring themselves for fever or symptoms consistent with COVID-19, and not reporting to work when ill or if testing positive for SARS-CoV-2 infection. • Any HCP who develop fever or symptoms consistent with COVID-19 should immediately contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing.
<p>Lower-risk: HCP with exposure risk other than those described as higher-risk above</p>	<p>N/A</p>	<ul style="list-style-type: none"> • No work restrictions or testing. • Follow all recommended infection prevention and control practices, including monitoring themselves for fever or symptoms consistent with COVID-19 and not reporting to work when ill. • Any HCP who develop fever or symptoms consistent with COVID-19 should immediately self-isolate and contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing. 	<ul style="list-style-type: none"> • No work restrictions or testing. • Follow all recommended infection prevention and control practices, including monitoring themselves for fever or symptoms consistent with COVID-19 and not reporting to work when ill. Any HCP who develop fever or symptoms consistent with COVID-19 should immediately self-isolate and contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing.

Source: Centers for Disease Control and Prevention. COVID-19. Interim guidance for managing healthcare personnel with SARS-CoV-2 infection or exposure to SARS-CoV-2. Updated Dec. 21, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html>

explaining why, in the first two weeks of the outbreak in South Africa, researchers reported, “the majority of patients in the COVID wards have not been oxygen-dependent.”¹⁴

Other recently published studies revealed patients were less likely to be hospitalized with omicron. Researchers in England found that, compared to the delta variant, the risk of hospitalization of one day or longer fell 40-45% for omicron.¹⁵

Early national data in Scotland suggest the risk of COVID-19 hospitalization is two-thirds lower for omicron infections compared to those caused by the delta variant. The researchers added the caveat: “the combination of increased risk of transmission and immune evasion of omicron mean that any advantage in reduced hospitalization could potentially [be] exceeded by increased rates of infection in the community.”¹⁶

The growing simplification of omicron as “rapid spread, but less severe” poses some challenges for public health communication and clinical discussions with patients. There are too many unknowns, including whether omicron could cause the prolonged symptoms of “long COVID,” or whether those infected will acquire natural immunity — and to what degree and duration. Previous infection with delta does not generally appear to confer immunity to omicron, based on the cases observed thus far.

While omicron has been described as causing milder disease, the range of illness in specific populations with underlying conditions, or in the unvaccinated as a whole, has not been scientifically established. Concerning the latter, if delta continues to retreat as expected, it will be of considerable interest to see if the marked differences in adverse outcomes between the immunized

and the unvaccinated remain relatively unchanged. When the delta variant reigned supreme, around 90% of hospitalizations and deaths due to SARS-CoV-2 were in the unvaccinated.

Facing a predicted tsunami of omicron, clinicians are cautious about reassuring anyone — particularly those who are unvaccinated — that this will be nothing to worry about.

“Most of the information we have of so-called ‘milder’ infections is because infections are occurring in vaccinated people who are boosted,” says **William Schaffner**, MD, professor of preventive medicine at Vanderbilt University. “What omicron will do in unvaccinated people has not been well described. We are being very cautious about telling people about this. We anticipate that it would not cause more severe disease comparable to the other variants, but we don’t know that.”

President Biden took the 40 to 50 million willfully unvaccinated Americans to task in a Dec. 21 address to the nation.¹⁷

“[It] is not just a choice about you — it affects other people,” Biden said. “You’re putting other people at risk — your loved ones, your friends, neighbors, strangers you run into. And your choice can be the difference between life or death. Every COVID-19 [hospitalization] means someone with a heart attack, cancer, or other serious illness may not get that bed and that lifesaving care they need in the hospital.”

Even if those who are unvaccinated agreed to take the vaccine — an unlikely outcome, to say the least — the omicron virus is spreading so fast, it is an open question whether there is sufficient time to go through the two-shot series, let alone the booster six months later. Two doses are certainly

better than one or none, but the heretofore standard regimen has been somewhat relegated to subclinical protection, as boosters are emphasized due to an estimated 25× (Pfizer) and 37× (Moderna) increase in protection. Even then, breakthrough infections occur. The authors of the U.K. study⁸ said the boosters show signs of waning immunity to initial infections after 10 weeks, but they still should be protective against severe disease and hospitalization.

‘The End of the Beginning’

The arrival of omicron marks the “end of the beginning” of the pandemic, as waves of the mutating virus wash across the world, **Nicholas Christakis**, MD, PhD, MPH, a sociologist and physician at Yale University, said in a recent interview.

“We’re feeling the full biological and epidemiological force of the virus,” Christakis said.¹⁸ “Basically, unless you’re a hermit in the mountains, or you’re incredibly lucky, everyone in the United States — in fact, everyone on the planet — is either going to be vaccinated for this condition or infected with the virus. We’re going to have to wait until that happens.”

It seems inevitable that many, if not the majority, of the unvaccinated will acquire the rapidly spreading omicron variant, especially if they ignore masking and other common-sense measures. Many of them may experience only mild infections, but enough could end up at hospitals that may be hard-pressed to care for them.

“It is not sustainable at this time,” Kang says. “Unfortunately, right now, the people who are bearing a lot of this are healthcare workers, whether

it be physicians, nurses, or our ancillary staff. Anyone working in the healthcare system — even outside the hospital. That includes our EMS and first responders, and also our nursing and long-term facilities.”

Given the prolonged pandemic conditions, stressed healthcare workers have been variously described as burned out or victims of moral injury. While these are among the most compassionate of people, some may have a short fuse for another wave of patients who refuse to be vaccinated.

“On occasion, [some healthcare workers] are really angry at their patients for not having been vaccinated,” Schaffner says. “Causing all this stress and, in a very personal way, exposing them and their families to COVID.”

Considering the multiple pressures, it does not help that some unvaccinated patients with COVID-19 view basic healthcare measures like masks with derision.

“The verbal abuse, the attitude, and tone [of the patients] takes a toll on the healthcare workforce, especially those on the frontline trying to do their best with limited resources,” Kang says. “There are definitely those [patients] who are very passionate regarding vaccinations and masks and make their opinions known. There are also those who are just frustrated by access to care. ‘Why I am waiting so long? Why am I still stuck here?’”

Kang and colleagues all are vaccinated and boosted, but hospitals in Tennessee have been stymied by a recent state law blocking COVID-19 immunization mandates.

“We had 99% acceptance of two doses,” Schaffner says. “It was obligatory — a mandate. Just as we were getting our booster campaign ready, our state passed a

law that no employer can require vaccination of their employees. We are in a legal limbo because that is being challenged. You can ask for an exemption, which I think every medical center in the state of Tennessee has.”

While Vanderbilt is working hard to convince staff to voluntarily take the booster shot, the evidence is clear that HCWs who defer the booster are at higher risk of infection and furlough from work. There was a noticeable difference after the staff were fully immunized with the two-shot regimen, Schaffner said.

“Once we got a larger and larger proportion of our personnel vaccinated, quarantine, isolation, and absences for reasons of illness just dropped like a stone,” he notes. “It was really very impressive. It became clear that the healthcare environment was safer than the community environment. [Of] our healthcare workers who became ill, we suspect the vast majority of them acquired infection in the [community] and not at work.” ■

REFERENCES

1. Centers for Disease Control and Prevention. Interim guidance for managing healthcare personnel with SARS-CoV-2 infection or exposure to SARS-CoV-2. Updated Dec. 23, 2021. <https://bit.ly/3mVf6YS>
2. Centers for Disease Control and Prevention. CDC releases emergency guidance for healthcare facilities to prepare for potential omicron surge. Dec. 23, 2021. <https://bit.ly/3mVfBll>
3. National Nurses United. Nurses condemn CDC’s dangerous decision to weaken isolation guidance for employers. Dec. 23, 2021. <https://bit.ly/3qUZbLA>
4. Centers for Disease Control and Prevention. CDC updates and shortens recommended isolation

and quarantine period for general population. Dec. 27, 2021.

<https://bit.ly/3EYdunk>

5. Centers for Disease Control and Prevention. Potential rapid increase of omicron variant infections in the United States. Dec. 20, 2021. <https://bit.ly/32PUQ4b>
6. Johnson J. Omicron in Oakland: How a Wisconsin wedding with ‘super responsible’ vaccinated people led to outbreak. *San Francisco Chronicle*. Dec. 10, 2021. <https://bit.ly/3eQ39Q0>
7. CDC COVID-19 Response Team. SARS-CoV-2 B.1.1.529 (omicron) variant — United States, December 1-8, 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1731-1734.
8. UK Health Security Agency. SARS-CoV-2 variants of concern and variants under investigation in England. Technical briefing 33. Dec. 23, 2021. <https://bit.ly/3eQtoG0>
9. Tercatin R. Why did Israel’s COVID-19 team recommend a 4th vaccine? A member explains. *Jerusalem Post*. Dec. 23, 2021. <https://bit.ly/3HFczdr>
10. The University of Hong Kong. HKUMed finds omicron SARS-CoV-2 can infect faster and better than delta in human bronchus but with less severe infection in lung. Dec. 15, 2021. <https://bit.ly/3eWWdQN>
11. Centers for Disease Control and Prevention. COVID data tracker: Variant proportions. Update Jan. 4, 2022. <https://bit.ly/3n75nid>
12. Centers for Disease Control and Prevention. COVID data tracker: Integrated county view. Updated Jan. 4, 2022. <https://bit.ly/3JB0CqZ>
13. Track coronavirus cases in places important to you. *The New York Times*. Updated Jan. 10, 2022. <https://nyti.ms/3ztUTyC>
14. Abdullah F. Tshwane District omicron variant patient profile — early features. South African Medical Research Council.

- <https://bit.ly/34qVUvX>
15. Ferguson N, Ghani A, Hinsley W, et al. Report 50 — Hospitalisation risk for omicron cases in England. The Imperial College of London. Dec. 22, 2021. <https://bit.ly/3FUBCbV>
16. Sheikh A, Kerr S, Woolhouse M, et al. Severity of omicron variant of concern and vaccine effectiveness against symptomatic disease: National cohort with nested test negative design study in Scotland. University of Edinburgh. Dec. 22, 2021. <https://bit.ly/3JGVZM1>
17. The White House. Remarks by President Biden on the fight against COVID-19. Dec. 21, 2021. <https://bit.ly/3eSdcUo>
18. PBS. Yale sociologist: COVID-19 will reshape humanity. Dec. 20, 2021. <https://to.pbs.org/32MoZ4c>

Are Boosters Prolonging the Pandemic?

Three in four health workers in Africa remain unvaccinated

President Biden announced the Federal Emergency Management Agency will create stand-up vaccination clinics across the United States to provide booster shots to those who have completed the standard two-shot regimen. The booster dramatically increases immune response for the Pfizer-BioNTech and Moderna vaccines.

“I’ll be deploying hundreds more vaccinators and more sites to help get the booster shots in people’s arms,” Biden said on Dec. 21. “Unfortunately, we still have tens of millions of people who are eligible for the booster shot who have not yet gotten it.”¹

Meanwhile, Israel is deploying a second booster shot due to signs of waning immunity in its third dose. The nation’s Pandemic Response Team ruled medical workers and anyone older than age 60 years could receive a fourth shot of the Pfizer vaccine. The shot will be available four months after receiving the third dose.²

But some people have raised the question of whether booster shots are unethical from a global perspective, and even counterproductive to ending the pandemic because highly mutated variants will continue to arise in unvaccinated patients. One of the critics of booster programs is **Tedros Adhanom Ghebreyesus**, PhD,

director general of the World Health Organization (WHO).

“Blanket booster programs are likely to prolong the pandemic, rather than ending it, by diverting supply to countries that already have high levels of vaccination coverage, giving the virus more opportunity to spread and mutate,” Tedros said in an address on Dec. 22. “It’s important to remember that the vast majority of hospitalizations and deaths are in unvaccinated people, not unboosted people.”³

Omicron Shows Mutation Threat

Around 3.5 million people died of SARS-CoV-2 in 2021, exceeding the deaths due to HIV, malaria, and tuberculosis combined in 2020. Globally, the pandemic virus is killing about 50,000 a week.

“It’s frankly difficult to understand how a year since the first vaccines were administered, three in four health workers in Africa remain unvaccinated,” Tedros said. “While some countries are now rolling out blanket booster programs, only half of WHO’s Member States have been able to reach the target of vaccinating 40% of their populations by the end of the year because of distortions in global supply.”

In this debate, omicron may be exhibit A. The new variant has mutated to move at unprecedented speed, incorporating prior effective mutations with others that have not been seen in any variant of SARS-CoV-2.

“Two factors of the mutations in omicron are concerning,” says **Pei-Yong Shi**, PhD, a distinguished professor of molecular biology at the University of Texas Medical Branch. “First is the sheer number — 30 to 40. It really depends on how you count them in the different isolates. The number [of mutations] is way larger than the previous variants, including delta, which has around the range of a dozen.”

The second concern is the nature of these individual mutations. “There are a lot of ‘old comers’ that have been analyzed in other variants,” Shi says. “Like the 484 mutation and the 501 mutation. We have done a lot of work on these, and they have clearly been shown to invade neutralizing antibody activities. The 501 mutation increases the spike protein binding affinity to the receptor human S2 [binding sites] by hundreds of folds. It is concerning that these old mutations are there, and then there are a lot of new ones, which we [have not seen]. That combination has a lot of scientific foundation to trigger concern.”

Infectious disease clinicians and researchers in South Africa warn the scarcity of COVID-19 vaccines on the continent and a large population of immune-compromised patients with HIV — 8 million of whom are not receiving antiretroviral treatment — sets the stage for continued mutation and global spread of SARS-CoV-2.⁴

The prevailing theory is omicron grew and mutated over months in an unvaccinated patient with uncontrolled AIDS in South Africa. Thus, the world's failure globally to extinguish the AIDS pandemic — to leave it burning among the impoverished and untreated — now compounds the risk of another pandemic of a highly mutable virus.

“Immunocompromised people with COVID promote the mutation and amplification of the virus,” Shi says. “That is the opportunity for the virus to change — it is like some sort of incubator or a petri dish. The virus can grow easily without much pushback from immune protections.”

It would be of great global benefit if wealthier nations helped Africa prevent and treat COVID-19 and HIV simultaneously, the South African researchers emphasized.

The priority in such an endeavor would be to “vaccinate Africa” for COVID-19.

“Over and above the ethical arguments to address vaccine nationalism and reduce deaths globally, the available data strongly indicate that vaccinating people in Africa will help to reduce transmission rates globally, limit the emergence of new variants, and accelerate global control of the pandemic,” the researchers concluded.

Notably, researchers have not definitively determined how the highly mutated omicron variant arose. Some hypothesize a reverse zoonosis — a reintroduction into an animal population, followed by a period of mutation, and then transmission back to humans. It contains some mutations Chinese scientists found are compatible with mice in a recently published paper that has not been peer reviewed.

“[M]utations in the omicron spike protein significantly overlapped with SARS-CoV-2 mutations known to promote adaptation to mouse hosts, particularly through enhanced spike protein binding affinity for the mouse cell entry receptor,” the

researchers reported.⁵ “Collectively, our results suggest that the progenitor of omicron jumped from humans to mice, rapidly accumulated mutations conducive to infecting that host, then jumped back into humans, indicating an interspecies evolutionary trajectory for the omicron outbreak.” ■

REFERENCES

1. The White House. Remarks by President Biden on the fight against COVID-19. Dec. 21, 2021. <https://bit.ly/3eSdcUo>
2. Tercatin R. Why did Israel's COVID-19 team recommend a 4th vaccine? A member explains. *Jerusalem Post*. Dec. 23, 2021. <https://bit.ly/3HFczdr>
3. World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19 22 December 2021. <https://bit.ly/3n2MpJG>
4. Msomi N, Lessells R, Mlisana K, de Oliveira T. Africa: Tackle HIV and COVID-19 together. *Nature* 2021;600:33-36.
5. Wei C, Shan KJ, Wang W., et al. Evidence for a mouse origin of the SARS-CoV-2 Omicron variant. *bioRxiv* 2021;12.14.472632. doi: <https://doi.org/10.1101/2021.12.14.472632>. [Preprint].

Worker Safety Is Critical to Patient Safety

Leverage safe lifting purchases as a patient safety issue

As the COVID-19 pandemic exacerbates the national nursing shortage, healthcare workers are finally seen as a valuable commodity that should not be routinely lost to injuries trying to manually lift and mobilize patients.

Lynda Enos, RN, BSN, MS, COHN-S, CPE, addressed this critical issue at a webinar¹ presented

by the Association of Occupational Health Professionals in Healthcare (AOHP).

“Maybe the one silver lining from this pandemic is we’re now really focused on retaining healthcare workers and keeping them safe, both physically and psychologically,” said Enos, an occupational health nurse and certified professional ergonomist

with more than 25 years of work and consulting experience. “That leads to better [patient] safety, comfort, and increased satisfaction.”

Ultimately, understanding worker safety equals patient safety improves the “well-being” of an organization.

“I think now more than ever, we have to make this link,” Enos said. “I am glad that we’re finally taking

worker safety seriously in healthcare. Certainly, we cannot have patient safety without worker safety.”

This argument preceded the pandemic, as healthcare workers suffered career-ending injuries trying to manually lift patients.

“Musculoskeletal disorders, such as back strains, are the leading cause of injuries to healthcare workers across the continuum in the U.S.,” Enos noted. “The numbers are likely underreported by 50% — that’s very concerning. We know that if patients cannot help move themselves, or they’re unwilling to assist, then there is no safe way to lift them manually. [This is] regardless of gender, how fit you are, or the age of the healthcare worker. We have a lot of science to support that.”

Looking under the iceberg, there is considerable evidence of downstream damage when staff suffer from musculoskeletal disorders.

“We know we have presenteeism, fatigue, higher turnover, poorer patient outcomes,” Enos said. “Tying your safe patient handling programs to patient outcomes is critical.”

Thus, in addition to protecting healthcare workers, using safe lifting and mobilizing equipment is safer for patients than trying to move them manually.

“Before COVID, we were looking at patient safety in the U.S. and saying we’re not No. 1 in the world,” Enos said. “Why is that? Over the last decade, many bodies, like OSHA, NIOSH, The Joint Commission, AHRQ, and the Institute for Healthcare Improvement have started to look at the impact of worker safety on patient safety.”

While manual lifting and injured workers certainly could put patients at risk, the realization that safe

lifting equipment also could protect patients was slower to come about. For one thing, there are few data on patients becoming injured while they are manually lifted or mobilized.

“There’s no reporting system for that,” Enos said. “There are lawsuits around this, but they’re often settled out of court, and those of you in employee safety may not know what’s going on in the risk management side in your facility. But it is worth trying to find out. If you’ve had cases where patients have been injured during manual handling, [try to get details on] the incident and the cost. That helps you establish a baseline when you’re looking at the impact of safe patient handling [equipment] on these patient safety outcomes.”

Change is slow to come. Enos said the “hook-and-toss” method remains standard. “This is when we put an arm under the patient’s arm and we drag them up or out the bed, and we try to stand them that way,” she explained. “We still teach students that in schools of nursing. You can dislocate a patient’s shoulder.”

Early Adopters

One of the trailblazers in making the worker-patient connection is Good Shepherd Medical Center (GSMC) in Hermiston, OR. The hospital implemented safe patient handling systems for worker and patient protection in 2008. GSMC reduced worker injuries and safely lifted patients without injuring them, using such equipment as ceiling lifts, hover mats, sliding mats, and a wheelchair mover for bariatric patients.¹

Enos, who helped implement the program at GSMC, sought patients’

feedback before discharge on their experience of being moved with safe lifting equipment.

“We wanted to know when they were lifted and moved with equipment, did they feel safe and comfortable? Actually, 98% of the patients who were lifted with lift equipment said they did feel safe and comfortable, and the 2% that did not were in so much pain, it wouldn’t matter how we were moving them,” Enos recalled. “Their pain levels were just too high.”

In consulting at other hospitals, Enos has worked on similar survey assessments, advising not to conduct the surveys after discharge because patients might not remember details about their lifting and mobilizing experience. She has since enhanced the survey to include audits, asking patients if healthcare workers explained the equipment and what they were doing to lift the patient.

“We want to know if staff are actually telling the patients what they’re going to do before they do it, and we want to know what [patients are] feeling about that experience at that moment in time while they can remember it,” Enos said.

If patient movement with safe lifting equipment became the norm across healthcare, it could become an expected standard of care for both occupational health and patient safety.

“We should be using safe patient handling mobility to protect our patients,” Enos emphasized. “We know if we keep healthcare workers safe, we’re probably going to have better patient outcomes and better patient experiences. When you’re making the business case for safe patient handling programs, think about making it in the context of [the patient and worker].”

For example, early mobility

is critical for the patients' improvement. Safe handling equipment is the best way to achieve it.

"This is a very hot topic right now in the U.S., especially related to safe patient handling and mobility [SPHM]," Enos said. "I think this is where SPHM really comes into its own. Unequivocally, you cannot early-mobilize a patient without the right equipment and trained staff."

Early mobility can start from raising the head of the bed, turning, boosting the patient, getting them to the edge of the bed, into a chair, and them ambulating.

"There's a whole progressive sequence of events," Enos said. "We know that if we have early mobility programs — this has been well researched — we decrease ventilator time; length of stay is shortened; we reduce the risk of deep vein thrombosis, muscular weakness, and falls. Then, we mitigate the long-term disability and decrease patient mortality."

Falls are another potential cause of patient injury and mortality.

Safe handling equipment has been underused in preventing this common occurrence. An average fall might extend patient stay by almost a week, resulting in non-reimbursable lost revenue.

"Some 80% of falls are unassisted, and usually the patient's trying to get to the bathroom," Enos said. "Here is a group of falls that we could prevent through safe patient handling."

Devices like powered sit-to-stand devices and ceiling lifts with an ambulating harness can prevent falls. Similarly, all the major wound care organizations agree dragging patients up in bed creates friction and shear that could harm the patient.

"They advise the use of lift sheets, friction-reducing devices, or lift equipment" Enos explained. "We've got the evidence base, but I still see nurses and aides drag patients up in bed because they think it's the quickest way to move them."

Employee health professionals must work with other medical groups to contribute to the best outcomes in workers and patients.

"We have to work with our falls prevention teams, wound care staff, risk management, and quality," she said. "It can't just be employee health and safety in a silo. Find one thing you think you can measure well. Definitely try to measure something that is a hot topic to your organization. Then, [determine] who can help you — quality, risk, finance, wound care, a falls prevention committee. Find out who looks at these patient safety outcomes, and get them on your team. Try pilot studies, self-reports. Start small." ■

REFERENCES

1. Enos L. Enhancing patient safety and outcomes: The safe patient handling connection. Association of Occupational Health Professionals in Healthcare. Aug. 11, 2021. <https://bit.ly/3HKdJ7i>
2. Mesaros M. Safe lifting: A small hospital builds a model program. *Oregon Health and Safety Resource*, August-September 2015. <https://bit.ly/3f0jCkt>

Missed Nursing Care and Declining Patient Safety

Making the case for 'missed nursing care' as a safety issue

While the immediate effect of the COVID-19 omicron variant on the healthcare workforce is the pressing issue, there were serious concerns about staff shortages and the effect of "missed nursing care" on patients well before the pandemic.

Missed nursing care is defined as delaying, omitting, or rationing care by nursing staff, said **Lynda Enos**, RN, BSN, MS, COHN-S, CPE, an occupational health nurse in Oregon with more than 25 years of work and

consulting experience. Enos addressed the issue of rationed care and the worsening effect of the pandemic on the nursing shortage at a recent webinar¹ held by the Association of Occupational Health Professionals in Healthcare.

Two Tasks Often Missed

"What some of the data are telling us is that missed nursing care, if we

can identify it on a unit, may be an early warning indicator before we have increased adverse events and patient deaths," she said. "The two most common tasks that are missed are ambulation from the bed and turning or repositioning in bed."

Enos emphasized just those two commonly neglected tasks can cause a cascade of adverse events, including ventilator-associated pneumonia, new-onset delirium, hospital-associated infections, falls,

longer lengths of stay, and more readmissions.

“Patients [missing nursing care] have increased pain and discomfort, and ultimately die sooner. That’s what I tell the nurses,” Enos explained. “If you miss care, your patient’s quality of life declines dramatically. There’s a lot of evidence to support this. There was a review² of 42 studies on missed nursing care, and 55% to 99% of nurses reported missing care in the prior shift that they worked. What they missed varies from facility to facility, and we do see there’s less missed nursing care in magnet facilities in the U.S. But when they asked how often you were missing the care, 76% said they were missing ambulating three times a day, and 60% of nurses said they missed turning care.”

COVID-19, Insufficient Faculty Are Factors

Unfortunately, this is a problem that is likely to get worse before it improves.

“COVID has had a huge impact on worker safety, on psychological stress, on burnout,” Enos said. “We have one in three healthcare workers thinking about leaving healthcare. We’re going to be short 1.2 million nurses by next year, just from retirement alone.”

Compounding the problem is insufficient faculty in medical schools to train the needed number of new nurses to fill the gap.

“Then, when they’re in school, we can’t send them on clinical rotation because of the COVID restrictions,” Enos said. “Here in Oregon at our teaching hospital, we’ve had to cut the number of students who can go on clinical rotation because of the social distancing.”

Indeed, missed nursing care is certainly looking like a problem that will continue indefinitely and create broad adverse risk to patients.

“Most of the evidence right now is in ICUs, but we’re starting to see research in med-surg units and long-term care as well, because this doesn’t just affect hospitals,” Enos said. “Obviously, if we don’t turn our patients, there’s the increased risk of pressure ulcers and declining function. We know that missed care is directly related to a higher likelihood of patient death and lower patient experience ratings. As we all know, if there’s not a good patient experience, that patient can go to a different hospital next time, and that results in lost revenue.”

Safety Culture Needed

Of course, understaffing will lead to missed care, but why does it still occur even with adequate staff?

“The first reason we have missed nursing care is culture,” Enos said. “Is there teamwork? Do we focus on patient and worker safety? What is the culture within the organization vs. the unit culture? Are we a high-reliability organization, or do we have very hierarchical leadership?”

There are competing demands on nurses’ time. They might be more reluctant to perform tasks such as turning or mobilizing a patient if safe lifting equipment is not readily accessible.

“Safe patient handling can really help mitigate missed nursing care, promote early mobilization, prevent falls and pressure injuries,” Enos said. “Communication and relationship factors between physical therapists and nurses are very important. Because when we don’t have a good dynamic between those two professions, our patients don’t get moved well and safely.”

The reality is nursing is a hard profession, and it may be difficult or impossible to meet all needs and expectations every day.

“I was teaching a group of nurses — they’re new hires within the last three months — and I asked them, ‘Have you ever seen missed nursing care occur?’ They all said, ‘yes,’” Enos said. “I asked, when does it occur? They said at the end of a 12-hour shift when they’re really tired, and of course we’re all short-staffed right now. This is actually a very serious issue. See if it’s occurring in your facility, and then try to use safe patient handling to mitigate it.” ■

REFERENCE

1. Enos L. Enhancing patient safety and outcomes: The safe patient handling connection. Association of Occupational Health Professionals in Healthcare. Aug. 11, 2021. <https://bit.ly/3HKdJ7i>
2. Jones TL, Hamilton P, Murry N. Unfinished nursing care, missed care, and implicitly rationed care: State of the science review. *Int J Nurs Stud* 2015;52:1121-1137.

COMING IN FUTURE MONTHS

- Supreme Court expected to rule on vaccine mandates for healthcare workers
- COVID-19 vaccines saved 1 million lives in 2021
- Update on OSHA’s COVID-19 temporary emergency standard
- A highly touted new approach to compassion fatigue



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CE QUESTIONS

- 1. Christopher Kang, MD, said several sociodemographic factors are coinciding with the COVID-19 omicron variant, threatening to overwhelm emergency departments. Which was not one of the factors?**
 - a. Patients who delayed care
 - b. Patients with long COVID
 - c. Shortage of emergency nurses
 - d. Mental health patients
- 2. While the prevailing theory is the omicron variant arose from an immunocompromised patient, some hypothesize a reverse zoonosis — a reintroduction into an animal population and then transmission back to humans. Omicron mutations compatible with which animal have been reported by Chinese researchers?**
 - a. Civet cats
 - b. Mink
 - c. Camels
 - d. Mice
- 3. Linda Enos, RN, BSN, MS, said there are few data on patients injuries during manual lifting, but these incidents sometimes lead to lawsuits. To bolster the case for safe patient handling equipment, what department did she suggest may have information on these cases?**
 - a. Human resources
 - b. Risk management
 - c. Physical therapy
 - d. Infection control
- 4. According to Tedros Ghebreyesus, PhD, director general of the WHO, approximately how many nurses in Africa have received a COVID-19 vaccine?**
 - a. One in four
 - b. Two in four
 - c. Three in five
 - d. Four in five

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.