## COVID-19 Vaccine Has Potential Side Effects, Nurse Volunteer Says

Marcia Frellick

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Nurse researcher Kristen Choi, PhD, RN, experienced first-hand a "worst-case scenario" of potential side effects after receiving an experimental COVID-19 vaccine in a phase 3 trial. She says clinicians should be prepared to reassure patients if reports of similar experiences spread when vaccine rollouts begin.

"This was the highest fever I can ever remember having, and it scared me," said Choi, with the School of Nursing at the University of California, Los Angeles.

Choi volunteered to participate in Pfizer's COVID-19 vaccine trial in August. When she came back for the second dose in September she began to experience distressing symptoms.

The symptoms, she writes in a perspective piece published online today in *JAMA Internal Medicine*, started with immediate pain at the injection site. By nightfall, she felt "felt light-headed, chilled, nauseous, and had a splitting headache" and went to bed.

She woke up at midnight and the symptoms had intensified and she could hardly move her arm from injection-site pain. Choi slept fitfully and when she woke up at 5:30 AM her thermometer read 104.9 °F (40.5 °C).

By the next morning all symptoms had disappeared except for a sore bump at the injection site.

Because the trial was blinded, Choi wasn't told whether she received the vaccine or placebo, but the symptoms left her with little doubt.

She told *Medscape Medical News* her reason for writing the article was to let anyone who will be administering a COVID-19 vaccine know that when a rollout begins some patients may experience the same side effects. Disclosure forms are not enough to make sure people understand that what they may experience is normal, she said.

After all, even Choi, who administers vaccines and whose career centers on research, began to fear something was wrong when symptoms flared even though she was thoroughly briefed on potential side effects. She says rational thought for her went out the window when her fever spiked.

## **Experts Say Her Symptom Combination Is Unusual**

Two vaccine experts told *Medscape Medical News* that Choi's symptoms were the extreme case and the vast majority of people will not experience her level of discomfort.

But they both agree Choi's message is an important reminder that healthcare professionals need to be prepared to answer questions when the rollouts begin.

Her story may also point out the need for creating a hotline for 24/7 access so that if patients do experience severe symptoms they can get answers right away, they said.

William J. Moss, MD, MPH, executive director of the International *Vaccine* Access Center at Johns Hopkins' Bloomberg School of Public Health in Baltimore, Maryland, told *Medscape Medical News* that spotlights on individual cases of extreme side effects should be paired with spotlights on the experience of a patient with COVID-19 in an intensive care unit to give proper context.

"The type of side effects we're seeing with the Pfizer and Moderna vaccines are typical of any vaccine, though there is a spectrum," Moss said.

"The numbers I've seen range from maybe 2% to 10% — maybe up to 15% — of people having these kinds of really noticeable side effects. Again all transient. But some people have more severe [reactions] than others." Moss continued. He notes that any inflammatory response — or reactogenicity — is normal.

"What we don't want is for people to be surprised by that," he said.

An important point, Moss says, is that "these are always transient, lasting 12-36 hours, maybe 48 hours."

Moss said people getting the vaccines should leave the vaccination location knowing a phone number to call if they experience severe symptoms so that they can talk directly with a healthcare professional at any time of day or night.

## "I Would Do it Again in a Heartbeat"

Choi wants to be clear that her message is not meant to warn against the vaccine itself: "I would do it again in a heartbeat even if I knew I was going to have the same reaction," she said.

Her message, rather, is that clinicians may be underestimating the effort it will take to be ready to correct misinformation; they should reassure patients that the symptoms come because the body is training itself to fight the virus.

Albert Rizzo, MD, chief medical officer for the American Lung Association, told *Medscape Medical News* that the side effects Choi experienced — especially all at once — are uncommon with the Pfizer vaccine as well as with the other two frontrunners by Moderna and Oxford/AstraZeneca.

"People should not expect to get that many side effects," he said.

However, milder side effects, such as soreness at the injection site, are common, he said.

Part of the message to patients should include the risk-benefit balance: an emphasis should be placed on weighing the deadly risk of COVID-19 as well as the benefit of helping protect society at large against potential vaccine side effects, he said.

Healthcare professionals should partner with other trusted influencers within cultures, particularly among people of color, where trust of vaccines is particularly low, Rizzo said. Leaders who understand both the hesitancy and the need for the vaccine can help reinforce the clinical message.

The American Lung Association, for instance, is partnering in the Black community with church pastors and community health center clinicians.

"We can't just from on high say this is an important thing to do," he said.

Choi reports grants from the Agency for Healthcare Research and Quality outside the submitted work. Rizzo and Moss have disclosed no relevant financial relationships.

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