

**WorkCare Briefing: Preventing and Managing COVID-19 in the Workplace**  
**Questions & Answers – Week 40**  
**December 16, 2020**

*The following questions were asked during WorkCare’s weekly webinar series on Preventing and Managing COVID-19 in the Workplace – Week 40. This week we focused on preparing the workplace for vaccinations. Anthony Harris, M.D., M.B.A., M.P.H., WorkCare’s Chief Innovation Officer and Associate Medical Director - Onsite Clinical Operations, presented the webinar and provided these answers. If your question is not answered here, it was answered in a previous Q&A.*

Here are links for your reference:

- [December 16 Webinar](#)
- [December 9 Webinar Recording](#)
- [Questions & Answers from the December 9 Webinar](#)

**SYMPTOMS**

**Q:** During the webinar, you referred to evidence of erectile dysfunction caused by SARS-CoV-2 infection. Could you discuss the age of patients affected and the percentage of related cases that have been observed?

**A:** We’ve seen cases reported in the literature, but erectile dysfunction as a result of COVID-19 has not been enumerated in terms of age range or numbers in any study that I’ve seen thus far. As research continues, we hope to gain a broader understanding of this issue.

**Q:** Has erectile dysfunction been observed after receiving a COVID-19 vaccination?

**A:** In clinical trials, it was not one of the prominent adverse events that was documented. Because the vaccine is not causing the same strong immunologic response as an infection does, one would not anticipate the inevitability of an erectile dysfunction adverse event. The Dr. Harris answer is, we don’t anticipate it. However, in the weeks to come we want to refer to specific, objective data that is presented and researched after initiating vaccine administration across the board.

**Q:** Have you seen prolongation of symptoms in people who have not had a severe case requiring hospitalization, i.e. moderate-to-severe fatigue, shortness of breath, headache?

**A:** There is evidence that a significant percentage patients referred to as “long-haulers” are not necessarily those who were hospitalized or treated in an intensive care unit. Clinical studies and anecdotal evidence provided by treating physicians indicate that many long haulers initially had mild-to-moderate symptoms. Researchers estimate about 10 percent of COVID-19 patients become long haulers. Refer to this article published in [The Journal of the American Medical Association](#) and a [study done by British scientists](#) to learn more.

**VACCINE**

**Q:** Can you comment, in general, on the efficacy of the vaccine? How does the Pfizer vaccine differ from the Moderna vaccine? How long does immunity last?

**A:** Efficacy-wise, both Pfizer and Moderna are similar – 94 or 95 percent efficacy after the second dose for both vaccines in phase 3 clinical trials. The immunity that’s imparted by the vaccine has been shown to be similar to natural immunity, meaning you get vaccinated and have a similar level of immunity to someone who recovered from COVID-19. The duration of that immunity has not yet been determined. However,

there are studies to show that individuals who have recovered from COVID-19 may have immunity for up to eight months if you look at memory B cells that are primed to attack COVID-19 once they're exposed to it again. Eight months is what is anticipated optimistically for the vaccine, as well. However, we are seeing reinfections that are occurring within a six-month timeframe, and in some cases even within a nine-day period. Those numbers are actually growing. Are they substantial? Not as of yet. But as we continue to weather this pandemic, we are likely to see that number of reinfections – during that time period in which we once thought immunity was maintained – to present themselves.

- Q:** How many strains of the virus do the Pfizer and Moderna vaccines address considering there have been so many different strains discovered and that the coronavirus is mutating?
- A:** Genetic studies suggest the newly developed vaccines may not need significant alterations because SARS-CoV-2 mutates slowly, and its genome remains relatively stable over time. However, subsequent booster shots are expected to be needed after initial inoculation. Scientists are monitoring changes in the coronavirus genome that codes for the shape of its spike protein, which is what enables the virus to invade cells.
- Q:** We are in the waste water treatment industry, thus essential services. How do we get our employees prioritized for vaccinations?
- A:** If you're in the essential worker/critical worker-designated market, then it's a state-by-state determination, and states vary in their approach. You fall into category 1b for receipt of the vaccine. Category 1a is front-line health care workers and residents of long-term care facilities and 1b targets the essential workforce. Working locally with your public health department and your state health department should give you the best opportunity to get on the second tranche of vaccine distribution.
- Q:** How did we get past the Spanish flu in 1918 without a vaccine?
- A:** The Spanish flu pandemic finally ran its course without a vaccine when those who were infected either died or developed immunity. An estimated 500 million people were infected and at least 50 million died, with about 675,000 deaths occurring in the United States. By comparison, as of Dec. 17, 2020, 1.65 million deaths worldwide and 308,000 deaths in the U.S. have been attributed to COVID-19 .
- Q:** Does autoimmune disease increase the risk of an adverse reaction to the COVID-19 vaccine?
- A:** Current research shows the vaccine is safe for people who have autoimmune disorders and those who are being treated with immunotherapies for conditions such as allergies, cancer and arthritis.

#### **TESTING**

- Q:** Many epidemiologists I work with have some major concerns with PCR reliability. When PCR is amplified over 34 times, it has a 100 percent false-positive rate unless it is performed between the third and fifth day after the first day of symptoms. Can you explain why we continue to refer to PCR as the "gold standard?"
- A:** PCR has been the gold standard because it is the most accurate technology that we have to combat COVID-19 thus far. Gold standard does not mean perfect, it just means it's the best we've got at a time in which we're trying to capture a sense of who is positive, the prevalence of who is positive, and track incidence over time. The antigen test is woefully short (particularly earlier on) in terms of accuracy compared with PCR as well as the serological test looking at immunogenicity or immunocompetence. PCR is the most accurate test we have to work with.

- Q:** Regarding the newly announced over-the-counter COVID-19 diagnostic home test, what impact do you think it's going to have on testing that is lab-based and the rate of potential false-negative or false-positive results?
- A:** Referring back to data published by Columbia University that modeled COVID-19 workplace transmission and how best to combat it, it was frequent testing – even testing every day, five days a week – that helped knock workplace transmissions almost to zero. Testing once a week had an effect, testing three times a week had a greater effect. So, as we look to solutions that allow us to more frequently test in a convenient manner, such as home collection, we anticipate a greater understanding of the true prevalence of COVID-19, not just workplace-based but in the community, as well. We also anticipate a substantial impact to decrease risk for transmission in the workplace based upon those models that were developed early in the pandemic and have since been upheld through objective data that has come from several industries, including the media industry in which they are testing three times a week to prevent cases of COVID-19 transmission. In terms of the impact on PCR testing and the market for PCR testing, it will likely decrease that market very little because we're only testing between 1.2 and 1.6 million people in the U.S. on a seven-day rolling average. That number has to be far higher to more accurately articulate the burden of illness. The numbers that were predicted – 12 million tests a day by the administration back in the spring – is where we need to live in order to get a true sense of prevalence and close to what we saw with the data on seropositivity, retrospectively.