COVID-19 Vaccination
Position Statement

The US Food and Drug Administration (FDA) is reviewing COVID-19 vaccine clinical trial data for approval and distribution of the vaccine among the US population in a phased approach. Healthcare personnel have been prioritized to receive this vaccine.

Certified Registered Nurse Anesthetists (CRNAs) and student registered nurse anesthetists are encouraged to educate themselves and make an informed decision about the vaccine. The American Association of Nurse Anesthetists (AANA) supports offering COVID-19 vaccination for frontline healthcare personnel, including CRNAs and other anesthesia professionals. The COVID-19 vaccine is an additional tool to support clinician safety. CRNAs should continue to use appropriate personal protective equipment and follow safety precautions including infection prevention and control and hand hygiene practices.

Facts About the COVID-19 Vaccines
Due to the current COVID-19 public health emergency, the vaccine development process has been accelerated, but efforts to speed vaccine development have not sacrificed scientific standards, integrity of the vaccine review process, or safety. Phase 3 clinical trials are in progress or planned for five COVID-19 vaccines in the US.

The FDA conducts a comprehensive evaluation of vaccine safety and efficacy data prior to an emergency use authorization decision. Moderna* and Pfizer-BioNTech (Pfizer)* have applied to the FDA for emergency use authorization, which if granted, could mean vaccine availability before the end of December 2020. Both companies have affirmed they are ready for rapid distribution of millions of vaccine doses. Only these two vaccines will be discussed here, due to the pending FDA approval and distribution.

Unlike conventional vaccines, these two vaccines were produced using messenger ribonucleic acid (mRNA) technology. mRNA vaccines are not made with virus particles or inactivated virus and therefore are non-infectious. Once injected, the mRNA will enter the cells, turning on cellular production of the “spike protein,” which is found on the surface of the coronavirus. When released into the circulatory system, these host-produced spike protein molecules will stimulate an immune response to produce protective antibodies. These antibodies will inactivate coronavirus particles before the host can be infected, therefore protecting against infection. The mRNA strand in the vaccine degrades once the protein is made. The mRNA does not enter the nucleus of the cell and does not integrate itself into the host genome.

The Pfizer vaccine must be stored at -70°C ±10°C and the Moderna vaccine at 2-8°C to prevent the breakdown of the mRNA molecules. The Pfizer vaccine is administered in two injections 21 days apart, while the Moderna vaccine is administered in two injections 28 days apart. Both vaccines have high efficacy, estimated at 90 – 95% effectiveness. Common vaccine responses reported include fever, muscle pain, fatigue, joint pain, chills and headache. Anaphylactoid reactions in two healthcare workers, each with a history of anaphylaxis, have been reported.

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Therefore, Pfizer issued an advisory for patients with a history of severe allergic reactions to avoid the vaccine.17

References
14. Weintraub K. Second dose of COVID vaccine from Pfizer or Moderna is needed, but timing doesn’t have to be exact, says government vaccine developer. USA Today. https://www.usatoday.com/story/news/health/2020/12/09/covid-vaccine-timing-second-


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