COVID-19 Vaccine: FAQs on Effectiveness and Risk

Q: Are COVID-19 Vaccines effective?

A: All three vaccines – Pfizer, Moderna and John & Johnson – are 90-95% effective at preventing hospitalization and death related to COVID-19.

Q: Are the vaccines effective against variants of the COVID-19 virus?

A: Viruses constantly change through mutation and become more diverse, and new variants of a virus are expected to occur. Multiple variants of the virus that causes COVID-19 have been documented in the United States and globally during this pandemic. The CDC continues to monitor these variants, and we continue to gain knowledge regarding vaccine effectiveness against variants. Early studies show between 73 and 100% effectiveness against severe disease related to COVID-19 variants.

Q: Are COVID-19 Vaccines safe and are there any side effects, including long-term side effects?

A: Serious events have rarely occurred in vaccinated patients. A serious event is one requiring hospitalization or resulting in prolonged disability. In clinical trials, 0.6% of vaccinated individuals reported a serious event versus 0.5% in the unvaccinated group.

There are some short-term side effects. Typically, about 75% of people who receive a COVID -19 vaccine report short-term side effects such as fatigue, soreness at the injection site, low grade fever, body aches, and headaches that last for one day.

While we don't know long-term effects of COVID-19 vaccination as we only began administering them in December 2020, we do know some long-term effects of COVID:

- An article in the Journal of American Medical Association (JAMA) reports 75% of individuals who were diagnosed with COVID-19 reported at least one persisting symptom (fatigue, brain fog, shortness of breath) for two to six months after recovery. Some patients reported long term damage to the heart, lungs and brain following a COVID-19 illness.

Q: Should I be concerned that the COVID-19 vaccines received emergency use authorization (EUA) and not full approval by the FDA?

A: One of the primary responsibilities of the U.S. Food and Drug Administration (FDA), a federal agency, is protecting the public health by ensuring the safety, efficacy, and security of drugs. The

FDA typically provides emergency use authorization (EUA) over full approval when needed to prevent death and serious harm.

The COVID-19 vaccines were developed quickly because pooled resources were used to run the clinical trials and evaluate the evidence. In the situation of the pandemic, the United States directed government agencies, non-profit organizations, pharmaceutical companies, academia, and international counterparts to focus on COVID-19 vaccine development. Other work was put aside. This allowed vaccine development to move faster than usual.

The Advisory Committee on Immunization Practices (ACIP), a group of medical and public health experts that develop recommendations on how to use vaccines to control diseases in the U.S., weighed the risks and benefits of all three approved vaccines and continue to strongly recommend vaccination. Local physicians agree and were among the first to receive the COVID-19 vaccine.

Q: Is the Johnson & Johnson Vaccine safe?

The Vaccine Adverse Event Reporting System (VAERS) is used to report adverse events occurring after vaccination. Data reported to VAERS was used to pause on use of the Johnson & Johnson to allow for further investigation of vaccine safety. A rigorous review of cases and data resulted in the recommendation for continued use of the Johnson & Johnson vaccine.

It was noted that 1 in 1 million (0.000001 or 0.0001%) vaccinated people may experience a life-threatening blood clot. **In comparison, for 25,000 in 1 million (0.025 or 2.5%) unvaccinated people who contract COVID, this disease is life threatening and predicted to result in death. If you contract COVID-19, your risk on average of getting severely ill, dying, or experiencing long-erm side effects are far greater than the risk from the vaccine.**