

A Brief Review of Three Coronavirus Disease 2019 (COVID-19) Vaccines

Chia-ping Su^{1*}, Meng-Yu Chen², Cha-Shien Yen¹

Abstract

One of the possible ways to end the SARS-CoV-2 pandemic is to develop COVID-19 vaccine and effective vaccination strategies. Some COVID-19 vaccines have been authorized for emergency use in a number of countries, and are currently in use around the world. These include an adenovirus-based vaccine (Astra-Zeneca), and two messenger RNA (mRNA) vaccines (mRNA-1273, manufactured by Moderna; BNT162b2, manufactured by Pfizer-BioNTech). These vaccines have been shown to be adequate in preventing SARS-CoV-2 infection, minimizing disease incidence, severity and mortality, according to current pre-licensure vaccine efficacy research and post-licensure vaccine effectiveness evaluations. Specific local reactions are common adverse reactions after receiving these vaccinations, and serious adverse events occur infrequently. However, more data is required after global vaccination to estimate long-term efficacy and protection in real-world condition, as well as the effects of vaccine against virus variants. Currently, the majority of studies indicate that vaccination protects people from COVID-19 and the benefits outweigh the risks. To reduce COVID-19-related morbidity and mortality, we encourage people who are prioritized in the immunization program to get vaccines as soon as possible.

Keywords: COVID-19 vaccine, Pfizer-BioNTech vaccine, Moderna vaccine, AstraZeneca vaccine, vaccine efficacy, vaccine effectiveness

¹Office of Preventive Medicine, Centers for Disease Control, Ministry of Health and Welfare, Taiwan

²Taipei Regional Center, Centers for Disease Control, Ministry of Health and Welfare, Taiwan

DOI: 10.6525/TEB.202104_37(7).0001

Corresponding author: Chia-ping Su^{1*}

E-mail: cpsu@cdc.gov.tw

Received: Mar. 31, 2021

Accepted: Apr. 06, 2021