	Pfizer	Moderna	Johnson & Johnson/Janssen
Type of Vaccine	mRNA	mRNA	rAd
Mechanism of Action	mRNA injected via IM route uses host cells to create spike protein for the immune system to respond to. *spike protein created cannot infect the host with SARS-CoV-2*		Vector vaccine injected via IM route that adds spike protein genetic information from the COVID-19 virus into an adenovirus vector that cannot replicate within the hosts cells *uses rAD26*
Efficacy	95% - ≥ 16 YO[1] 100% - 12-15 YO[2]	94.1% - ≥ 18 YO[3]	66.3% - ≥ 18 YO[4]
Side Effects	Injection-site pain, fatigue, headache muscle pain, chills, joint pain, nausea, fever, feeling unwell Rare: anaphylaxis, myocarditis	Injection-site pain, fatigue, headache muscle pain, chills, joint pain, nausea, fever, feeling unwell Rare: anaphylaxis, myocarditis	Injection-site pain, fatigue, headache, muscle pain, chills, fever, nausea Rare: blood clotting disorder, Guillain-Barré syndrome
Number of Population Studied	N = 21,720[1] N = 1,131[2]	N = 14,134[3]	N ≈ 20,000[4] N ≈ 15,000[8]
Doses Required for Primary Series	2 (21 days apart) *see Pfizer booster information*	2 (28 days apart) *see Moderna booster information*	1
Booster Shots (CDC/FDA)	Immunocompromised[‡ϕ] ≥ 65 YO[†] 18-64 YO with high-risk of severe illness[† Δ] 18-64 who have frequent institutional or occupation exposure to COVID-19[†Σ]	Immunocompromised[‡ϕ]	**NOT RECOMMENDED**
Booster Shots (States)	**Maryland:** ≥ 65 YO and living in congregate care setting (mRNA only)[6] **Colorado:** All patients starting September 20th. mRNA only (Pfizer followed by Moderna)[7]		**AWAITING DATA**
Other Comments	**FDA Approved (08/2021)** **FDA Emergency Use Authorization –**	**FDA Emergency Use Authorization (12/2020; amended 08/2021 – Booster Dose)**	**FDA Emergency Use Authorization (02/2021; amended 04/2021)**

	Booster Dose (08/2021; amended 09/2021)		Phase 3 trials (ENSEMBLE and ENSEMBLE 2) still in progress 94% protection against symptomatic COVID-19 in the US [CI, 58%-100%][8,9]

‡ - 28 days after completion[5]

† - 6 months after completion of series[10,11]

Φ – receiving active cancer treatment for tumors or cancers of the blood, receive dan organ transplant and are taking medicine to suppress the immune system, received a stem cell transplant within the last 2 years or are taking medicine to suppress the immune system, moderate or severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome), advance or untreated HIV infection, and/or active treatment with high-dose corticosteroids or other drugs that may suppress your immune system[5]

Δ – cancer, chronic kidney disease, chronic lung diseases (COPD, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis, and pulmonary hypertension), dementia or other neurological conditions, diabetes (type I or II), down syndrome, heart conditions (heart failure, coronary artery disease, cardiomyopathies, or hypertension), HIV infection, immunocompromised state, liver disease, overweight and obesity, pregnancy, sickle cell disease or thalassemia, smoking (current or former), solid organ or blood stem cell transplant, stroke or cerebrovascular disease, and/or substance use disorders[10,11]

Σ – health care workers, teachers, day care staff, grocery workers, etc.[10,11]

Pfizer:

Dose 1 → 21 days → Dose 2 + 14 days = Completed Series

Immunocompromised: Completed Series + 28 days → Dose 3 Booster

Non-Immunocompromised but meets FDA/CDC criteria for booster: completed series + 6 months → Dose 3 Booster

Moderna:

Dose 1 → 28 days → Dose 2 + 14 days = Completed Series

Immunocompromised: Completed Series + 28 days → Dose 3 Booster

Non-Immunocompromised but meets FDA/CDC criteria for booster: NOT RECOMMENDED

J&J:

Dose 1 + 14 days = Completed Series

Immunocompromised or Non-Immunocompromised but meets FDA criteria for booster: NOT RECOMMENDED

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