Yale NewHaven Health

YNHHS COVID-19 Vaccine Decision Table

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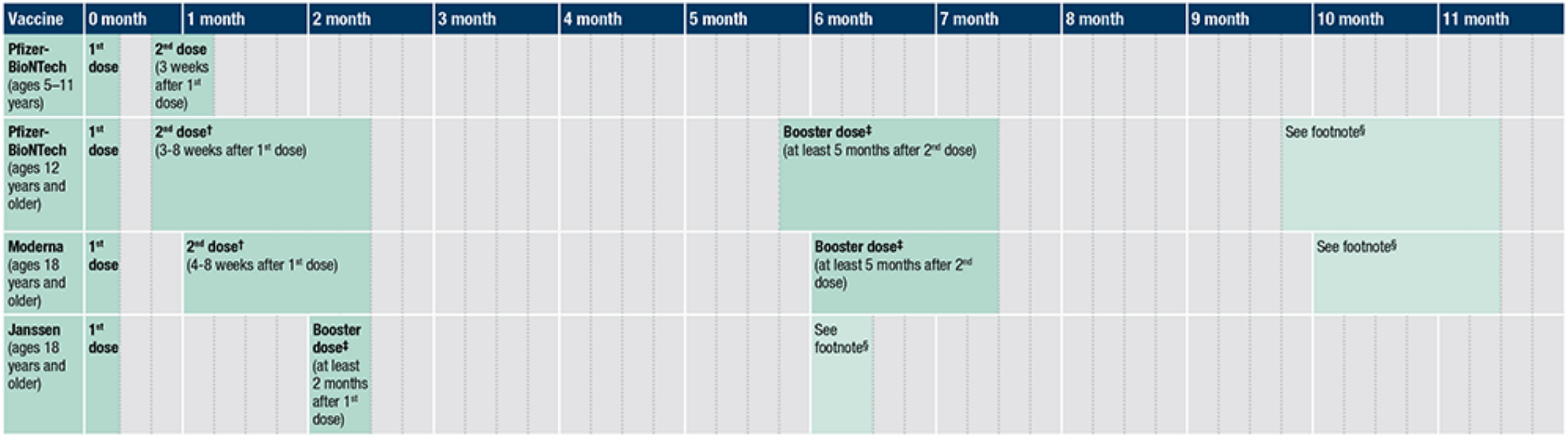
Vaccine Recommendations for the General Population



‡Any COVID-19 vaccine can be used for the booster dose in people ages 18 years and older, though mRNA vaccines are preferred. For people ages 12–17 years, only Pfizer-BioNTech can be used. People ages 5–11 years should not receive a booster dose.

†An 8-week interval may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years. A shorter interval (3 weeks for Pfizer-BioNTech; 4 weeks for Moderna) between the first and second doses remains the recommended interval for: people who are moderately or severely immunocompromised; adults ages 65 years and older; and others who need rapid protection due to increased concern about community transmission or risk of severe disease.

§ People ages 18–49 years who received Janssen COVID-19 Vaccine as both their primary series dose and booster dose **may** receive an mRNA COVID-19 booster dose at least 4 months after the Janssen booster dose. People ages 50 years and older may choose to receive a second booster dose if it has been at least 4 months after the first booster dose.

General Population

		Primary Series Dose 1	Primary Series Dose 2	Booster Dose #1	Booster Dose #2
Pfizer 12+	**Age for use (years)**	**16+ (Approved)* 12 - 15 (EUA)**	**16+ (Approved)* 12 - 15 (EUA)**	**12+ (EUA)**	**18+ (EUA)********
	Contraindications	*See Appendix 1 and Appendix 2*			
	Eligibility Criteria	No restrictions other than age and contra-indications			**Previous Doses** Janssen booster – 18yo + mRNA booster – 50yo +
	Dose	30 mcg/0.3 mL	30 mcg/0.3 mL	30 mcg/0.3 mL	30 mcg/0.3 mL
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**21-56** days since Dose 1** *See Appendix 4 for factors that should delay vaccination*	**5 months after completion of primary series** *See Appendix 4 for factors that should delay vaccination*	**4 months since Booster Dose #1** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No	Yes w/ Moderna 50 mcg/0.25 mL if age 18+ **OR** Janssen (J&J) 5×10^{10} VP/0.5 mL if age 18+***	Yes w/ Moderna 50 mcg/0.25 mL if age 18+

*The Pfizer-BioNTech COVID-19 vaccine (Comirnaty) is FDA approved for patients 16 years and older as part of primary series (2 doses separated by 21 days).

**An 8-week interval may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years. A shorter interval (3 weeks for Pfizer-BioNTech; 4 weeks for Moderna) between the first and second doses remains the recommended interval for: people who are moderately or severely immunocompromised; adults ages 65 years and older; and others who need rapid protection due to increased concern about community transmission or risk of severe disease.

***The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1
--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns

****People ages 18–49 years who received Janssen COVID-19 Vaccine as both their primary series dose **and** booster dose **may** receive an mRNA COVID-19 booster dose at least 4 months after the Janssen booster dose. People ages 50 years and older **may** choose to receive a second booster dose if it has been at least 4 months after the first booster dose.

General Population

		Primary Series Dose 1	Primary Series Dose 2	Booster Dose #1	Booster Dose #2
Moderna	**Age for use (years)**	**18+ (Approved)***	**18+ (Approved)***	**18+ (EUA)**	**18+ (EUA)********
	Contraindications	*See Appendix 1 and Appendix 2*			
	Eligibility Criteria	No restrictions other than age and contra-indications			**Previous Doses** Janssen booster – 18yo + mRNA booster – 50yo +
	Dose	100 mcg/0.5 mL	100 mcg/0.5 mL	50 mcg/0.25 mL	50 mcg/0.25 mL
	Interval	- *See Appendix 4 for factors that should delay vaccination*	**28-56** Days** *See Appendix 4 for factors that should delay vaccination*	**5 months after completion of primary series** *See Appendix 4 for factors that should delay vaccination*	**4 months since Booster Dose #1** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No	Yes w/ Pfizer 30 mcg/0.3 mL **OR** Janssen (J&J) 5×10^{10} VP/0.5 mL***	Yes w/ Pfizer 30 mcg/0.3 mL

*The Moderna COVID-19 vaccine (Spikevax) is FDA approved for patients 18 years and older as part of primary series (2 doses separated by 28 days).

**An 8-week interval may be optimal for some people ages 12 years and older, especially for males ages 12 to 39 years. A shorter interval (3 weeks for Pfizer-BioNTech; 4 weeks for Moderna) between the first and second doses remains the recommended interval for: people who are moderately or severely immunocompromised; adults ages 65 years and older; and others who need rapid protection due to increased concern about community transmission or risk of severe disease.

***The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1
--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns

****People ages 18–49 years who received Janssen COVID-19 Vaccine as both their primary series dose **and** booster dose **may** receive an mRNA COVID-19 booster dose at least 4 months after the Janssen booster dose. People ages 50 years and older **may** choose to receive a second booster dose if it has been at least 4 months after the first booster dose.

General Population

		Primary Series Dose 1	Booster Dose #1	Booster Dose #2
Janssen (J&J)*	**Age for use (years)**	**18+ (EUA)**	**18+ (EUA)***	N/A**
	Contraindications	*See Appendix 1 and Appendix 2*		N/A**
	Eligibility Criteria	No restrictions other than age and contra-indications*		N/A**
	Dose	5×10^{10} VP/0.5 mL	5×10^{10} VP/0.5 mL	N/A**
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**2 months after completion of primary dose*** *See Appendix 4 for factors that should delay vaccination*	N/A**
	Interchangeability	-	Yes* w/ Pfizer 30 mcg/0.3 mL **OR** Moderna 50 mcg/0.25 mL	N/A**

* The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1.

--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns.

People ages 18+ years who received Janssen COVID-19 Vaccine as both their primary series dose **and booster dose **may** receive an mRNA COVID-19 booster dose at least 4 months after the Janssen booster dose.

General Population

		Primary Series	
		Dose 1	**Dose 2**
Pfizer 5-11	**Age for use (years)**	**5-11 (EUA)**	**5-11 (EUA)**
	Contra-indications	*See Appendix 1 and Appendix 2*	
	Eligibility Criteria	No restrictions other than age and contra-indications	
	Dose	10 mcg/0.2 mL*	10 mcg/0.2 mL*
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**21 days** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No

*Children should receive the vaccine dosage and formulation based on their age on the day of vaccination with each dose. If a child turns 12 years old between their first and second dose, they should receive the age-appropriate 30 mcg dose (purple or gray cap) formulation for their second dose to complete their series. However, the EUA allows children who will turn from age 11 years to 12 years between their first and second dose in the primary regimen to receive, for either dose, either: (1) the Pfizer formulation for children ages 5–11 years (10 mcg in an orange cap vial); or (2) the Pfizer formulation authorized for use in individuals ages 12 years and older (30 mcg in a purple cap or gray cap vial). If such dosing occurred, the child is considered fully vaccinated. This is not considered an error and VAERS reporting is not indicated.

Vaccine Recommendations for the **Moderately to Severe ImmunoCOMPROMISED** Population APPENDIX 3

Vaccine	0 month	1 month	2 month	3 month	4 month	5 month	6 month	7 month	8 month	9 month
Pfizer-BioNTech (ages 5–11 years)	**1st dose**	**2nd dose** (3 weeks after 1st dose)	**3rd dose** (at least 4 weeks after 2nd dose)							
Pfizer-BioNTech (ages 12 years and older)	**1st dose**	**2nd dose** (3 weeks after 1st dose)	**3rd dose** (at least 4 weeks after 2nd dose)			**Booster dose*** (at least 3 months after 3rd dose)			See footnote§	
Moderna (ages 18 years and older)	**1st dose**	**2nd dose** (4 weeks after 1st dose)	**3rd dose** (at least 4 weeks after 2nd dose)			**Booster dose*** (at least 3 months after 3rd dose)				See footnote§
Janssen (ages 18 years and older)	**1st dose**	**2nd** (additional) dose† using an mRNA COVID-19 vaccine (at least 4 weeks after 1st dose)		**Booster dose*** (at least 2 months after additional dose)				See footnote§		

*An mRNA COVID-19 vaccine is preferred over the Janssen COVID-19 Vaccine for booster vaccination of people ages 18 years and older. For people ages 12–17 years, only Pfizer-BioNTech can be used. A booster dose is not authorized for people ages 5–11 years.

†Only Pfizer-BioNTech or Moderna COVID-19 Vaccine should be used. See Appendix 5 for more information on vaccinating people who are moderately or severely immunocompromised and who received Janssen COVID-19 Vaccine for the primary series.

‡People ages 12 years and older may choose to receive a second booster dose using an mRNA COVID-19 vaccine if it has been at least 4 months after the first booster dose. For people ages 12–17 years, only Pfizer-BioNTech can be used.

Patients who are Moderately to Severely ImmunoCOMPROMISED

		Primary Series Dose 1	Primary Series Dose 2	Primary Series Additional Primary Dose	Booster Dose #1	Booster Dose #2
Pfizer 12+	**Age for use (years)**	**16+ (Approved)* 12 - 15 (EUA)**	**16+ (Approved)* 12 - 15 (EUA)**	**12+ (EUA)**	**12+ (EUA)**	**12+ (EUA)*** **
	Contraindications	*See Appendix 1 and Appendix 2*				
	Eligibility Criteria	No restrictions other than age and contra-indications	No restrictions other than age and contra-indications	Immunocompromised only *(Appendix 3)*	No restrictions other than age and contra-indications	No restrictions other than age and contra-indications
	Dose	30 mcg/0.3 mL	30 mcg/0.3 mL	30 mcg/0.3 mL	30 mcg/0.3 mL	30 mcg/0.3 mL
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**21 days since Dose 1** *See Appendix 4 for factors that should delay vaccination*	**28 days since Dose 2** *See Appendix 4 for factors that should delay vaccination*	**3 months since Additional Primary Dose** *See Appendix 4 for factors that should delay vaccination*	**4 months since Additional Primary Dose** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No	No	Yes w/ Moderna 50 mcg/0.25 mL if age 18+ **OR** Janssen (J&J) 5×10^{10} VP/0.5 mL if age 18+**	Yes w/ Moderna 50 mcg/0.25 mL if age 18+

*The Pfizer-BioNTech COVID-19 vaccine (Comirnaty) is FDA approved for patients 16 years and older as part of primary series (2 doses separated by 21 days).

**The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1

--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns

***People ages 12 years and older may choose to receive a second booster dose using an mRNA COVID-19 vaccine if it has been at least 4 months after the first booster dose. For people ages 12–17 years, only Pfizer-BioNTech can be used.

Patients who are Moderately to Severely ImmunoCOMPROMISED

		Primary Series Dose 1	Primary Series Dose 2	Primary Series Additional/Third Dose	Booster Dose #1	Booster Dose #2
Moderna	**Age for use (years)**	**18+ (Approved)***	**18+ (Approved)***	**18+ (EUA)**	**18+ (EUA)**	**18+ (EUA)**
	Contraindications	*See Appendix 1 and Appendix 2*				
	Eligibility Criteria	No restrictions other than age and contra-indications	No restrictions other than age and contra-indications	Immunocompromised only *(Appendix 3)*	No restrictions other than age and contra-indications	No restrictions other than age and contra-indications
	Dose	100 mcg/0.5 mL	100 mcg/0.5 mL	100 mcg/0.5 mL	50 mcg/0.25 mL	50 mcg/0.25 mL
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**28 Days since Dose 1** *See Appendix 4 for factors that should delay vaccination*	**28 days since Dose 2** *See Appendix 4 for factors that should delay vaccination*	**3 months since Additional Primary Dose** *See Appendix 4 for factors that should delay vaccination*	**4 months since Additional Primary Dose** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No	No	Yes w/ Pfizer 30 mcg/0.3 mL **OR** Janssen (J&J) 5×10^{10} VP/0.5 mL**	Yes w/ Pfizer 30 mcg/0.3 mL

*The Moderna COVID-19 vaccine (Spikevax) is FDA approved for patients 18 years and older as part of primary series (2 doses separated by 28 days).

**The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1

--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns

***People ages 12 years and older may choose to receive a second booster dose using an mRNA COVID-19 vaccine if it has been at least 4 months after the first booster dose. For people ages 12–17 years, only Pfizer-BioNTech can be used.

Patients who are Moderately to Severely ImmunoCOMPROMISED

		Primary Series Dose 1	Primary Series Additional Primary Dose	Booster Dose #1	Booster Dose #2
Janssen (J&J)*	**Age for use (years)**	**18+ (EUA)**	*See Appendix 5*	**18+ (EUA)**	N/A**
	Contra-indications	*See Appendix 1 and Appendix 2*			N/A**
	Eligibility Criteria	No restrictions other than age and contra-indications	Immunocompromised only *(Appendix 3)*	No restrictions other than age and contra-indications	N/A**
	Dose	5×10^{10} VP/0.5 mL	*See Appendix 5*	5×10^{10} VP/0.5 mL	N/A**
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	*See Appendix 5*	**2 months since Additional Primary Dose** *See Appendix 4 for factors that should delay vaccination*	N/A**
	Interchangeability	-	*See Appendix 5*	Yes w/ Pfizer 30 mcg/0.3 mL **OR** Moderna 50 mcg/0.25 mL	N/A**

**The CDC has expressed a clinical preference for individuals to receive an mRNA COVID-19 vaccine (Pfizer or Moderna) over the Janssen (J&J) vaccine due to the risk of serious adverse events. Vaccine recipients must be informed of the risks and benefits of J&J/Janssen COVID-19 vaccination. The J&J/Janssen COVID-19 vaccine may be considered if persons:

--Had a severe reaction after an mRNA vaccine dose or who have a severe allergy to an ingredient of Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) – see Appendix 1

--Want to get the J&J/Janssen COVID-19 vaccine despite the safety concerns

People ages 12 years and older may choose to receive a second booster dose using an mRNA COVID-19 vaccine if it has been at least 4 months after the first booster dose. For people ages 12–17 years, only Pfizer-BioNTech can be used.

Patients who are Moderately to Severely ImmunoCOMPROMISED

		Primary Series Dose 1	Primary Series Dose 2	Primary Series Additional Primary Dose
Pfizer 5-11	**Age for use (years)**	**5-11 (EUA)**	**5-11 (EUA)**	**5-11 (EUA)**
	Contra-indications	*See Appendix 1 and Appendix 2*		
	Eligibility Criteria	No restrictions other than age and contra-indications	No restrictions other than age and contra-indications	Immunocompromised only *(Appendix 3)*
	Dose	10 mcg/0.2 mL*	10 mcg/0.2 mL*	10 mcg/0.2 mL*
	Interval	NA *See Appendix 4 for factors that should delay vaccination*	**21 Days since Dose 1** *See Appendix 4 for factors that should delay vaccination*	**28 days since Dose 2** *See Appendix 4 for factors that should delay vaccination*
	Interchangeability	-	No	No

*Children should receive the vaccine dosage and formulation based on their age on the day of vaccination with each dose. If a child turns 12 years old between their first and second dose, they should receive the age-appropriate 30 mcg dose (purple or gray cap) formulation for their second dose to complete their series. However, the EUA allows children who will turn from age 11 years to 12 years between their first and second dose in the primary regimen to receive, for either dose, either: (1) the Pfizer formulation for children ages 5–11 years (10 mcg in an orange cap vial); or (2) the Pfizer formulation authorized for use in individuals ages 12 years and older (30 mcg in a purple cap or gray cap vial). If such dosing occurred, the child is considered fully vaccinated. This is not considered an error and VAERS reporting is not indicated.

Appendixes

APPENDIX 1:
Contraindications and precautions to COVID-19 vaccination due to allergies

CONTRAINDICATION TO COVID-19 VACCINATION	PRECAUTION TO COVID-19 VACCINATION	MAY PROCEED WITH COVID-19 VACCINATION
•**History of the following:**Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of a COVID-19 vaccine*[†] •Known (diagnosed) allergy to a component of a COVID-19 vaccine[*]	•**Among people without a contraindication, a history of:**Any immediate allergic reaction[‡] to other vaccines (non-COVID-19) or injectable therapies[§] •Non-severe, immediate (onset <4 hours) allergic reaction[†] after a previous dose of COVID-19 vaccine[#] Note: people with a contraindication to mRNA COVID-19 vaccines have a precaution to Janssen COVID-19 Vaccine, and vice versa[¶]	•**Among people without a contraindication or precaution, a history of:**Allergy (including anaphylaxis) to oral medications (including the oral equivalent of an injectable medication) •History of food, pet, insect, venom, environmental, latex, etc., allergies, including anaphylaxis •Family history of allergies
•**Actions:**Do not vaccinate •Consider referral to allergist-immunologist •Consider other vaccine alternative if age appropriate*[¶]	•**Actions:**Risk assessment •30-minute observation period if vaccinated (see footnotes 5 and 6 for information on vaccination setting) •Consider referral to allergist-immunologist	•**Actions:**30-minute observation period: people with history of anaphylaxis (due to any cause) •15-minute observation period: all other people

Footnotes on next page

APPENDIX 1:
Contraindications and precautions to COVID-19 vaccination due to allergies - footnotes

[1]See Appendix 2 for a list of ingredients.

People with a contraindication to one of the mRNA COVID-19 vaccines should not receive doses of either of the mRNA vaccines (Pfizer-BioNTech or Moderna). However, some of these individuals may be able to receive Janssen COVID-19 Vaccine after a detailed risk assessment and possibly allergy testing (see footnote 5 below).

[2]Severe allergic reactions include:

- Possible anaphylaxis, a progressive life-threatening reaction that typically includes urticaria but also with other symptoms such as wheezing, difficulty breathing, or low blood pressure
- Any angioedema affecting the airway (i.e., tongue, uvula, or larynx)
- Diffuse rash which also involves mucosal surfaces (e.g., Stevens-Johnson Syndrome)
- Non-severe allergic reactions may include:
- Urticaria (hives) beyond the injection site
- Angioedema (visible swelling) involving lips, facial skin, or skin in other locations. NOTE: Any angioedema affecting the airway (i.e., tongue, uvula, or larynx) would NOT be in this category and is considered a severe allergic reaction

[3] Immediate allergic reaction to a vaccine or injectable therapy is defined as any hypersensitivity-related signs or symptoms consistent with urticaria, angioedema, respiratory distress (e.g., wheezing, stridor), or anaphylaxis that occur within four hours following administration.

[4] People with a history of an immediate allergic reaction to a non-COVID-19 vaccine or injectable therapy that contains multiple components, one or more of which is a component of a COVID-19 vaccine, but it is unknown which component elicited the allergic reaction, have a precaution to vaccination with that COVID-19 vaccine. These individuals may benefit from consultation with an allergist-immunologist who can perform a more detailed risk assessment for COVID-19 vaccine receipt and possibly allergy testing.

[5] Polyethylene glycol (PEG) is an ingredient in both mRNA COVID-19 vaccines, and polysorbate 80 is an ingredient in Janssen COVID-19 Vaccine. PEG and polysorbate are structurally related, and cross-reactive hypersensitivity between these compounds may occur. People with a contraindication to mRNA COVID-19 vaccines (including due to a known allergy to PEG) have a precaution to Janssen COVID-19 Vaccine. Among people who received a first mRNA COVID-19 dose but for whom the second dose is contraindicated, consideration may be given to vaccination with Janssen COVID-19 Vaccine (administered at least 28 days after the mRNA COVID-19 dose). People with a contraindication to Janssen COVID-19 Vaccine (including due to a known allergy to polysorbate) have a precaution to mRNA COVID-19 vaccines. For people with these precautions, referral to an allergist-immunologist should be considered. Healthcare professionals and health departments may also request a consultation from the Clinical Immunization Safety Assessment COVIDvax project. In patients with these precautions, vaccination should only be undertaken in an appropriate setting under the supervision of a healthcare professional experienced in the management of severe allergic reactions.

[6] For people with a history of an immediate, non-severe allergic reaction after an mRNA COVID-19 vaccine, vaccination with a subsequent dose of either of the mRNA COVID-19 vaccines should only be undertaken in an appropriate setting under the supervision of a health care provider experienced in the management of severe allergic reactions. Similarly, for people with a history of an immediate, non-severe allergic reaction after Janssen COVID-19 Vaccine, vaccination with a subsequent dose of Janssen vaccine should only be undertaken under the supervision of a health care provider experienced in the management of severe allergic reactions. Administering the other vaccine type is another option; this can be done with a 30-minute observation period in a usual COVID-19 vaccination setting.

APPENDIX 2:
Vaccine components

Description	Pfizer-BioNTech (mRNA) For persons age 5-11 years (orange cap) and ≥12 years (gray cap) formulations	Pfizer-BioNTech (mRNA) For persons age ≥12 years (purple cap) formulation	Moderna (mRNA) For persons age ≥18 years	Janssen (viral vector) For persons age ≥18 years
Active ingredient	Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2 • 5–11 years (orange cap): 10 **µg** • 12 years and older (gray cap): 30 **µg**	Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2 (**30 µg**)	Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2	Recombinant, replication-incompetent Ad26 vector, encoding a stabilized variant of the SARS-CoV-2 Spike (S) protein
Inactive ingredients	2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide	2[(polyethylene glycol (PEG))-2000]-N,N-ditetradecylacetamide	PEG2000-DMG:1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol	Polysorbate-80
	1,2-distearoyl-sn-glycero-3-phosphocholine	1,2-distearoyl-sn-glycero-3-phosphocholine	1,2-distearoyl-sn-glycero-3-phosphocholine	2-hydroxypropyl-β-cyclodextrin
	Cholesterol	Cholesterol	Cholesterol	Citric acid monohydrate
	(4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	(4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	SM-102:heptadecan-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate	Trisodium citrate dihydrate
	Tromethamine	Sodium chloride	Tromethamine	Sodium chloride
	Tromethamine hydrochloride	Monobasic potassium phosphate	Tromethamine hydrochloride	Ethanol
	Sucrose	Potassium chloride	Acetic acid	
		Dibasic sodium phosphate dihydrate	Sodium acetate	
		Sucrose	Sucrose	

* None of the vaccines contain eggs, gelatin, latex, or preservatives. All COVID-19 vaccines are free from metals such as iron, nickel, cobalt, lithium, rare earth alloys or any manufactured products such as microelectronics, electrodes, carbon nanotubes, or nanowire semiconductors.

APPENDIX 3:
Immunocompromised conditions that qualify for an additional primary dose and booster dose

- Active blood cancer (for example, leukemia, lymphoma, myeloma, myelodysplastic syndrome) even if not on treatment for the cancer
- Receiving treatment for a solid tumor with chemotherapy, hormonal therapy, immunotherapy, surgery and/or radiation therapy (currently or within one year of initial mRNA COVID-19 vaccine series)
- Received a stem cell transplant within the last two years or requiring immune-suppressing medication
- Received a solid organ transplant (such as a kidney or liver transplant) and are taking immune-suppressing medication
- Moderate or severe primary immunodeficiency (such as DiGeorge or Wiskott-Aldrich syndrome)
- Advanced or untreated HIV disease
- Taking (or were taking at the time of initial mRNA COVID-19 vaccine series) high-dose corticosteroids (equal to at least 20 mg of prednisone daily) or other **medications that suppress the immune system**:
    - 6-mercaptopurine (Purinethol, Purixin)
    - Abatacept (Orencia)
    - Adalimumab (Humira)
    - Alemtuzumab (Lemtrada, Campath)
    - Anakinra (Kineret)
    - Azathioprine (Imuran, Azasan)
    - Baricitinib (Olumiant)
    - Belatacept (Nulojix)
    - Benlimumab (Benlysta)
    - Certolizumab (Cimzia)
    - Cladribine (Mavenclad)
    - Cyclosporine (Gengraf, Neoral, Sandimmune)
    - Etanercept (Enbrel, Erelzi)
    - Fingolimod (Gilenya)
    - Golimumab (Simponi)
    - Infliximab (Remicade, Inflectra, Renflexis, Avsola)
    - Methotrexate (Otrexup, Rasuvo, Rheumatrex, Trexall)
    - Mycophenolate motefil (Cellcept, Myfortic)
    - Obinutuzumab (Gazyva)
    - Ocrelizumab (Ocrevus)
    - Ofatumumab (Kesimpta)
    - Ozanimod (Zeposia)
    - Rituximab (Rituxan, Truxima, Ruxience, Riabni)
    - Siponimod (Mayzent)
    - Sirolimus (Rapamune)
    - Tacrolimus (Prograf, Envarsus XR)
    - Tofacitinib (Xeljanz, Xeljanz XR)
    - Upadacitinib (Rinvoq)

APPENDIX 4:
Timing of COVID-19 vaccination dose relative to timing of COVID-19 and other infections as well as to timing of other immunizations

Condition	Recommended delay
COVID-19 infection with symptoms	Defer vaccination until person has recovered from their illness and completed a 10-day isolation period. Persons who were severely ill from COVID-19 (i.e., required hospitalization, intensive care, or ventilation support) and persons who are severely immunocompromised should defer vaccination until they are no longer symptomatic and have completed a 20-day isolation period.
COVID-19 infection without symptoms	Defer vaccination until person has completed a 10-day isolation period. Persons who are severely immunocompromised should defer vaccination until they have completed a 20-day isolation period.
COVID-19 exposure	Defer vaccination unless person does not need to quarantine (see criteria) or has met criteria for discontinuing quarantine in order to avoid potentially exposing others during the vaccination visit. This applies to people with a known COVID-19 exposure who have received their first dose of an mRNA vaccine but not their second.
Flu-like illness/ upper respiratory infection	Patients with a mild illness may receive a COVID-19 vaccine. A moderate or severe illness is a precaution to receiving any currently FDA-authorized or FDA-approved COVID-19 vaccine. It is not considered a contraindication. Generally, vaccination should be delayed until the acute illness has improved. However, if you and your patient believe the potential benefits of vaccination outweigh the potential risks, they may receive COVID-19 vaccine.
Monoclonal antibody therapy	No recommended deferral period for monoclonal antibody treatment administered for post-exposure prophylaxis or treatment. However, tixagevimab/cilgavimab (EVUSHELD) should be deferred for at least two weeks after vaccination
Any other vaccine administration whether attenuated or live (e.g., MMR, influenza, etc.)	COVID-19 vaccines may be administered without regard to timing of other vaccines, including simultaneous administration of COVID-19 vaccine and other vaccines on the same day. If multiple vaccines are administered at a single visit, administer each injection in a different site. For people ≥11 years of age, the deltoid muscle can be used for more than one intramuscular injection administered at different sites in the muscle. For children (5–10 years of age), if more than two vaccines are injected in a single limb, the vastus lateralis muscle of the anterolateral thigh is preferred because of greater muscle mass.
History of myocarditis or pericarditis after a dose of an mRNA COVID-19 vaccine but before administration of a subsequent dose of COVID-19 vaccine	There are no data on the safety of administering a subsequent dose of any COVID-19 vaccine to people who had myocarditis or pericarditis after a dose of an mRNA COVID-19 vaccine. It is unclear if people who developed myocarditis or pericarditis after a dose of an mRNA COVID-19 vaccine may be at increased risk of further adverse cardiac effects following a subsequent dose of the vaccine. Until additional safety data are available, people who develop myocarditis or pericarditis after a dose of an mRNA COVID-19 vaccine **should not** receive a subsequent dose of any COVID-19 vaccine. Administration of a subsequent dose of COVID-19 vaccine before additional safety data are available can be considered in certain circumstances: refer to CDC for additional details (Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC)

Sources:

Frequently Asked Questions about COVID-19 Vaccination | CDC
COVID-19 Vaccine FAQs for Healthcare Professionals | CDC
Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC

APPENDIX 5:
Guidance for People who are Moderately or Severely Immunocompromised and Vaccinated with Janssen COVID-19 Vaccine

COVID-19 Vaccination History	And	Then	Next Dose Due
1 dose	The dose was Janssen COVID-19 Vaccine	•Administer a second dose (an additional mRNA vaccine) at least 28 days after the 1st dose.Pfizer: 0.3mL, or •Moderna 0.5mL	•Administer a booster dose at least 2 months after the 2nd dose.*Pfizer: 0.3mL, or •Moderna 0.25mL, or •Janssen: 0.5mL (mRNA is preferred over Janssen)
2 doses	Both doses are Janssen COVID-19 Vaccine	•Administer a third dose (additional mRNA vaccine) at least 2 months after the 2nd dose.Pfizer: 0.3mL, or •Moderna 0.5mL	Vaccination series complete; no additional vaccinations needed.
	1 dose of Janssen COVID-19 Vaccine and 1 dose of an mRNA COVID-19 Vaccine (given as booster dose, i.e., Pfizer 0.3mL or Moderna 0.25mL)[+]	•Administer a third dose (additional mRNA vaccine) at least 2 months after the 2nd dose.Pfizer: 0.3mL, or •Moderna 0.5mL	Vaccination series complete; no additional vaccinations needed.
	1 dose of Janssen COVID-19 Vaccine and 1 dose of an mRNA COVID-19 Vaccine (given as additional dose, i.e., Pfizer 0.3mL or Moderna 0.5mL)[+]	•Administer a booster dose of any COVID-19 vaccine 2 months after the 2nd dose.Pfizer: 0.3mL, or •Moderna 0.25mL, or •Janssen: 0.5mL (mRNA is preferred over Janssen)	Vaccination series complete; no addition

*mRNA vaccines are preferred.
[+]When reviewing vaccination history, doses of the Moderna COVID-19 Vaccine received prior to February 7, 2022 should be considered to have been the booster dosage (0.25 mL; 50 mcg).