

# Omaha Metropolitan Healthcare Coalition

## COVID-19 Vaccine Quick Reference Guide

### Vaccines: Storage and Handling

Storage/Handling	Janssen Biotech (Ad26.COV2.S) <sup>1-3</sup>	Moderna (mRNA-1273) <sup>4-6</sup>	Pfizer-BioNTech (BNT162b2) <sup>9-13</sup>
Dry ice	Do not use; not stored frozen	Do not use	Thermal shipping container may be used as temporary storage for up to 30 days from delivery with proper dry ice replenishment.
Freezer storage	Do not store frozen	-25°C to -15°C <ul style="list-style-type: none"> <li>Protect from light until ready to use</li> <li>Keep in original packaging</li> <li>Do not store below -40°C</li> </ul>	-80°C to -60°C until expiration date or vials may be stored at -25°C to -15°C for up to 2 weeks <ul style="list-style-type: none"> <li>Protect from light until ready to use</li> <li>Keep in original packaging</li> <li>Expires 6 months from manufacturing</li> </ul>
Refrigerator storage	2°C to 8°C	2°C to 8°C for up to 30 days	2°C to 8°C for up to 1 month <ul style="list-style-type: none"> <li>Minimize room light exposure and avoid exposure to direct sunlight/ultraviolet light</li> </ul>
Refrigerator thawing	<ul style="list-style-type: none"> <li>Vaccine is initially stored frozen by the manufacturer, then shipped at 2°C to 8°C. If vaccine is still frozen upon receipt, thaw at 2°C to 8°C. If needed immediately, thaw at room temperature (maximally 25°C). At room temperature (maximally 25°C), a carton of 10 vials will take ~2 hours to thaw, and an individual vial will take ~1 hour to thaw.</li> </ul>	<ul style="list-style-type: none"> <li>11-Dose Vial: Thaw in refrigerator (2°C to 8°C) for 2.5 hours</li> <li>15-Dose Vial: Thaw in refrigerator (2°C to 8°C) for 3 hours</li> <li>After thawing, let each vial stand at room temperature for 15 minutes prior to administering.</li> </ul>	<ul style="list-style-type: none"> <li>Thaw in refrigerator (2°C to 8°C); may take up to 3 hours depending on number of vials</li> <li>Must be at room temperature at least 30 minutes prior to diluting</li> <li>Must dilute within 2 hours of removal from refrigerator or freezer</li> </ul>
Room temperature thawing	<ul style="list-style-type: none"> <li>Unpunctured vials may be stored between 9°C to 25°C for up to 12 hours.</li> </ul>	<ul style="list-style-type: none"> <li>11-Dose Vial: Thaw at room temperature (15°C to 25°C) for 1 hour</li> <li>15-Dose Vial: Thaw at room temperature (15°C to 25°C) for 1 hour and 30 minutes</li> <li>Unpunctured vials may be stored between 8°C to 25°C for up to 24 hours.</li> </ul>	<ul style="list-style-type: none"> <li>Thaw at room temperature (up to 25°C) for 30 minutes</li> <li>Must be at room temperature at least 30 minutes prior to diluting</li> <li>Must dilute within 2 hours of removal from refrigerator or freezer</li> </ul>
In vial	<ul style="list-style-type: none"> <li>Stable for up to 6 hours from first puncture at 2°C to 8°C or up to 2 hours at room temp (max 25°C)</li> <li>Discard vial if not used within these times</li> </ul>	<ul style="list-style-type: none"> <li>Stable for up to 12 hours from initial vial piercing at 2°C to 25°C</li> <li>Discard after 12 hours</li> </ul>	<ul style="list-style-type: none"> <li>Stable for up to 6 hours from dilution at 2°C to 25°C</li> <li>Discard after 6 hours</li> </ul>
In syringe	<ul style="list-style-type: none"> <li>Filled syringes stable for up to 6 hours stored in refrigerator (2°C to 8°C) or 2 hours stored at room temperature (max 25°C) after first vial puncture</li> </ul>	<ul style="list-style-type: none"> <li>Stable for up to 12 hours from initial vial puncture (Labeling and time stamp recommended) &lt;letter on file&gt;<sup>18</sup></li> <li>Store in refrigerator (2°C to 8°C) or at room temperature (15°C to 25°C)</li> <li>Keep out of direct sunlight</li> </ul>	<ul style="list-style-type: none"> <li>Stable for up to 6 hours from dilution at 2°C to 25°C ± 2°C in polycarbonate and polypropylene syringes with stainless steel needles</li> <li>Discard after 6 hours</li> </ul>
Notes	<ul style="list-style-type: none"> <li>Never refreeze vaccines after thawing.</li> <li>CDC states that pre-drawing vaccines may result in waste if more are drawn up than necessary, so they state that vaccines should be drawn only in preparation for immediate administration.</li> </ul>		

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### Vaccine Differences & Practical Considerations

	Janssen Biotech (Ad26.COV2.S) <sup>1-3</sup>	Moderna (mRNA-1273) <sup>7-8</sup>	Pfizer-BioNTech (BNT162b2) <sup>13-15</sup>
Age minimum	18 years	18 years	12 years
Dose	0.5 mL	0.5 mL	0.3 mL
Dose interval dose 1 to 2	N/A; Single dose	4 weeks	3 weeks
Dilution required? Additional instructions	<ul style="list-style-type: none"> <li>DO NOT DILUTE</li> <li>Before withdrawing each dose of vaccine, carefully mix the contents of the multi-dose vial by swirling gently in an upright position for 10 seconds. <b>Do not shake.</b></li> <li><b>Do not pool vaccine from multiple vials.</b></li> </ul>	<ul style="list-style-type: none"> <li>DO NOT DILUTE</li> <li>Swirl gently after thawing and between each withdrawal. <b>Do not shake.</b></li> <li>Pierce stopper at different site each time.</li> <li><b>Do not pool vaccine from multiple vials.</b></li> </ul>	<ul style="list-style-type: none"> <li>Yes, after vial reaches room temperature invert vial 10 times; dilute with 1.8 mL of <b>Preservative-Free</b> 0.9% Sodium Chloride (USP) for Injection and remove 1.8 mL of air from vial; invert vial 10 times. <b>Do not shake.</b></li> <li>Must be diluted within 2 hours from the time the vial was removed from refrigerator or freezer.</li> <li><b>Do not pool vaccine from multiple vials.</b></li> </ul>
Number of doses per vial per fact sheet	5	10-15 (depends on vial size)	6
Number of full doses per vial based on experience	5	Two Vial Sizes: Maximum 11-Dose vial (10-11 doses) NDC 80777-273-99 Maximum 15-Dose vial (13-15 doses) NDC 80777-273-98	6-7 doses If using low dead-volume syringes with pre-attached needles, 6-7 doses can usually be obtained from the vial. If not, the average number of full-doses/vial is ~5.4
Determining number of vials to thaw	Vials are stored refrigerated, no need to thaw	Consider 'no shows' and vials currently stored and/or thawing in the refrigerator. <b>Example Calculation:</b> ▶ 609 vaccinations scheduled*1 (100% show rate)/10 = 60.9 vials (round up) ▶ 61 – 2 vials from previous clinic – 10 vials thawing in refrigerator = remove 49 vials from freezer	Consider 'no shows' and vials currently stored and/or thawing in the refrigerator. <b>Example Calculation:</b> ▶ 609 vaccinations scheduled*1 (100% show rate)/5.5 = 110.7 vials (round up) ▶ 111 vials - 2 vials remaining in refrigerator = remove 109 vials from freezer
If vaccine is defective, damaged, or mishandled	Call Janssen Medical Information: 1-800-565-4008	Call Moderna Medical Information: 1-866-663-3762	Call Pfizer Medical Information: 1-800-438-1985
Needle length <sup>16</sup>	For intramuscular injection in adults 19 years of age and older who weigh ≥260 lbs (men) or ≥200 lbs (women), a 1.5-inch needle should be used.		
Injection site <sup>17</sup>	Deltoid muscle of arm. Alternately, the anterolateral thigh may be used (dose should be pulled with 1.5-inch needle/syringe combination intended for use).		

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