



# TOOLKIT

## SECTION 4: VACCINE ORDERING, STORAGE, AND HANDLING

*Last Updated April 21, 2022*

# CONTENTS

Vaccine Ordering . . . . .	4-3
Determining How Much to Order . . . . .	4-5
Ordering Vaccines Through Local Health Departments . . . . .	4-6
Ordering Tools . . . . .	4-7
Tips for Ordering . . . . .	4-7
Ancillary Kits . . . . .	4-8
Vaccine Shipment Packaging . . . . .	4-9
Unpacking & Labeling . . . . .	4-10
Storage & Handling . . . . .	4-11
Organizing Vaccine Stock . . . . .	4-13
Expiration Dates . . . . .	4-14

# VACCINE ORDERING

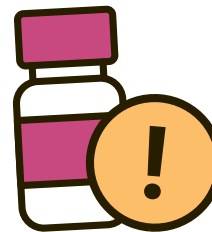
Vaccine ordering takes place within I-CARE. Delivery time for all vaccines is approximately one week. Quantities vary depending on the vaccine manufacturer.

- **Moderna:** each shipping tray contains 10 vials (100 doses)
  - The box label has been updated to indicate:
    - Total volume of the multi-dose vial.
    - Dosing information on primary and booster shots are listed on the label.
    - Maximum number of punctures per vial.
- **Janssen (Johnson & Johnson):** each tray contains 10 vials (50 doses), minimum order of 2 trays (100 doses) required
- **Pfizer pediatric:** ships packages of 10 vials (100 dose trays), minimum order is 100 doses and must be ordered in increments of 100 doses
- **Pfizer adult:** shipping tray sizes are 50 vials (300 doses) or 195 vials (1,170 doses) - remember, you cannot use adult vials on pediatric populations!

## Creating a Standard Operating Procedure

Establishing a clear standard operating procedure (SOP) for vaccine storage, handling, and administration is an easy way to minimize vaccine waste. Consider designating a vaccine coordinator for the facility who can:

- Order vaccines
- Oversee storage and handling
- Document vaccine inventory
- Dispose of expired vaccines



**Remember, you cannot use adult vaccine products on pediatric populations. See [page 5-13](#) on vaccine interchangeability**

# VACCINE ORDERING (CONTINUED)

## Before You Order, Make Sure You Select the Necessary Storage Equipment

The equipment you choose should be carefully selected to ensure that they are reliable and allow for temperatures to remain stable. As with all vaccines, you must verify your facility is meeting proper storage requirements to ensure the vaccine does not lose its potency.

Cold-chain storage and handling requirements for each COVID-19 vaccine product will vary from refrigerated (2°C to 8°C) to frozen (-15°C to -25°C) to ultra-cold (-60°C to -80°C).

## Maintaining Appropriate Storage Temperatures

You will need a calibrated thermometer or temperature recording device inside each piece of storage equipment. To ensure your facility is adhering to proper storage guidelines, be sure to have cold chain procedures in place that are routinely reviewed and monitored. If an error occurs, **corrective action should be taken as soon as possible**. See the CDC's resource for Handling a Temperature Excursion in Your Vaccine Storage Unit [here](#).



# DETERMINING HOW MUCH TO ORDER

When determining how much vaccine to order, please consider the following key ordering criteria:

- Order for estimated use and maintain enough inventory to last 3 weeks; inventory should not exceed a one-month supply
- Geography and concentration of vaccine locations or events
- Patient population size and percent that is expected to uptake



**TIP:** You can survey patients to better understand what phase individuals are in (early adopters, laggards) as this may impact content and provider ordering.



**The goal is to vaccinate every eligible and interested patient!**

Some waste is expected.

# ORDERING VACCINES THROUGH LOCAL HEALTH DEPARTMENTS

Vaccines can be ordered through local health departments in some jurisdictions. Local health departments may also offer additional services to get vaccines to your facility like delivery, local pick up for smaller quantities, etc. Please use the links below to learn more about ordering vaccines through our local health departments:

- **Chicago** - [Department of Public Health COVID-19 Vaccine Request Form](#)
- **Cook County** - [Department of Public Health COVID Vaccine Information for Healthcare Providers](#)
- **DuPage County** - [Health Department Pfizer BioNTech Vaccine Request Form](#)  
(offers vaccine delivery to those who do not have the proper equipment to do a pickup)
- **Franklin Williamson Bi County Health** - contact Laurie Allen at 618-993-8111 x 228
- **Macon County** - contact Rachel Deerwester at [rdeerwester@maconchd.org](mailto:rdeerwester@maconchd.org) or [aholthaus@maconchd.org](mailto:aholthaus@maconchd.org)
- **Madison County Health Department** – Request vaccine by contacting [COVIDvax@co.madison.il.us](mailto:COVIDvax@co.madison.il.us) or call 618-692-8954
- **McHenry County** - email [Vaccine@mchenrycountyil.gov](mailto:Vaccine@mchenrycountyil.gov). Once your email is received and confirmed, a transfer request to I-CARE to schedule a pick-up date/time will be made. You will need to pick up the vaccine and ancillary supplies from the office located in Woodstock, IL. You will need to bring a cooler for transportation of the vaccine and a digital data logger for monitoring the cooler's temperature.



# ORDERING TOOLS

## Vaccine Matchmaker

“The COVID-19 Vaccine MatchMaker Service” is designed to help utilize existing inventory and prevent vaccines or needles from expiring. This is only for unopened vials of vaccine. It allows providers that need the vaccine to view a list of providers with excess vaccine in their area and for providers to input their own excess inventory to be utilized by others. View the website and matchmaker tool [here](#). Consider checking the matchmaker before placing orders into I-CARE.

## Hub and Spoke Model for Small Practices

If minimum shipment sizes are too large for your office to use before expiration, the hub and spoke model can be used. The smaller primary care office would partner with a hub – an entity that places the order and receives the shipment. A hub could be a local health department, affiliated hospital or main clinic, or a willing pharmacy. The hub would complete an online transfer form in I-CARE to share vaccine with the primary care office – the spoke. The office would be responsible for picking up the vaccine.



## TIPS FOR ORDERING

Keep your inventory current! At any given time, someone in your clinic, organization, or practice should know how many doses you have left.

Input what you have given into I-CARE in a timely fashion and update your vaccine inventory at [VaccineFinder](#). Administrators from local, state, and federal health departments are looking at those numbers to decide how much vaccine Illinois gets or needs! Use the **“Add Vaccine”** option to add NDCs to your location to report inventory doses.

# ANCILLARY KITS

Vaccines are shipped with ancillary supplies in a separate box. These kits vary, but generally include needles, syringes, alcohol prep pads, and diluent if applicable. There is no separate order process for the ancillary supplies.

**Important notes:** Diluent included in ancillary kits with the Pfizer pediatric vaccine contain 10mL diluent vials. While these vials appear to contain sufficient diluent for multiple vials, they must only be used once as they are a one-time-use item. They should be discarded with the remaining content after each use. For each vial of vaccine, extract 1.3mL of diluent from a single-use vial to reconstitute 1.3mL of vaccine. **Do not be tempted to puncture diluent vials more than once.**

Remember that:

- The Pfizer ancillary kits will only contain 1 inch length needles
- No need to train new staff on when to use a 5/8 inch length needle

More on needle sizes in **Section Five - Vaccine Administration**. Ancillary supplies provided DO NOT include Epi Pens or Epinephrine. You are expected to supply Epi Pens or Epinephrine and assure this emergency equipment is available during administration of the vaccine to children. You can use the Immunization Action Coalition (IAC) handout [Medical Management of Vaccine Reactions in Children and Teens in a Community Setting](#) as a standing order for management of vaccine reactions.



# VACCINE SHIPMENT PACKAGING

## SHIPPERS

Vaccine manufacturers have developed packaging and storage to support the different locations these products are being sent. Vaccines may arrive in specially designed, temperature-controlled thermal shippers; some may even have dry ice to maintain recommended storage temperatures.



**It's important to be prepared to move vaccines from shippers to on-site storage in a timely fashion.**

The Pfizer products will be shipped with a SAGA Data Logger that tracks detailed temperature information during shipment. Vaccine coordinators will get an email with temperature updates during shipping, including any breaches in protocol. The SAGA shipper must be returned in the provided packaging after vaccine receipt.

Further information about vaccine storage guidelines is available on the CDC's [Pinkbook](#) and [Vaccine Storage and Handling Toolkit](#) (Mar 2021).



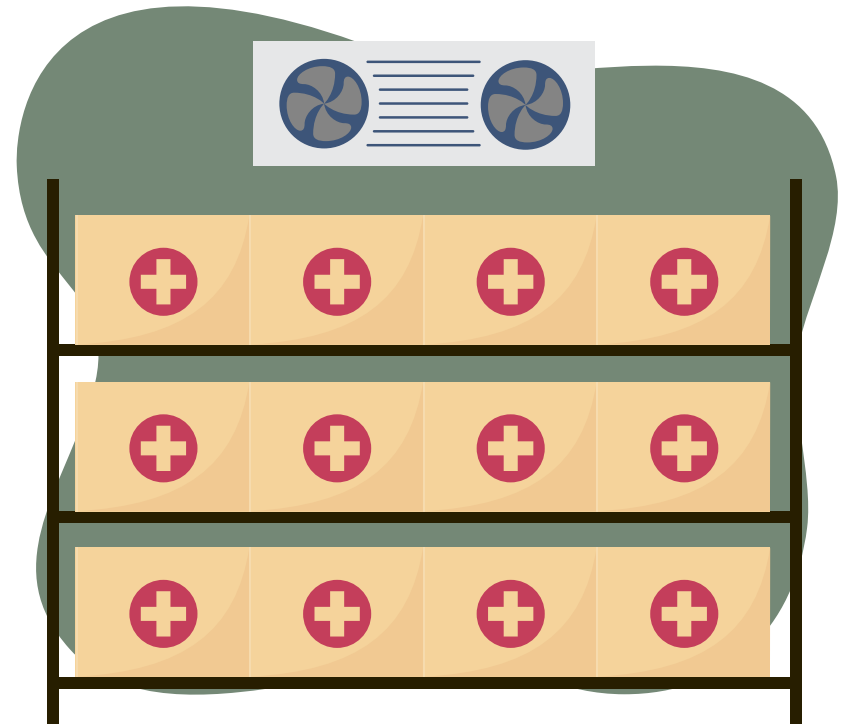
# UNPACKING & LABELING

## VACCINES ARRIVED – NOW WHAT?

- Vaccines and diluents should be carefully unpacked and moved into storage as soon as they arrive.
- Ancillary supplies will be in a separate box.
- Examine the shipping containers for the correct quantity and any signs of damage.



**TIP:** Use color coded labels to sort each shipment – this will make it easier to see which vaccines are closest to their expiration date.



# STORAGE & HANDLING

## Make Sure You Do Not Miss an Important Storage Alert



Be sure to add these contacts to your safe sender lists so that you receive order, shipping, and temperature monitoring alerts:

- [cvgovernment@pfizer.com](mailto:cvgovernment@pfizer.com)
- [Pfizer.logistics@controlant.com](mailto:Pfizer.logistics@controlant.com)
- [onsitemonitoring@controlant.com](mailto:onsitemonitoring@controlant.com)



**Check out the CDC's At-A-Glance Resource Guide on Vaccine Administration, Storage, and Handling**

[View PDF](#)

# STORAGE & HANDLING (CONTINUED)

VACCINE MANUFACTURER/ PRODUCT	THERMAL SHIPPER AS TEMPORARY STORAGE?	OPTIONS FOR STORAGE UPON ARRIVAL AS OF 1.13.22
<p><b>Pfizer-BioNTech</b></p> <p>5 through 11 years ("Age 5y to &lt;12y" on vial label)</p> <p>Orange top</p> <p><b>SHIPPED FROM PFIZER</b></p>	<p><b>NO -</b></p> <p>Remove the temperature monitoring device from the shipping container and check the temperature monitor for any excursion warnings, turn the monitor off</p> <p>Return device using the included prelabeled foldable return box. Dispose of the single-use thermal shipping container.</p>	<ul style="list-style-type: none"> <li>Ultra-low-temperature freezers (-70°C ± 10°C), for up to 6 months.</li> <li>Refrigeration units that are commonly available in hospitals and pharmacies: <ul style="list-style-type: none"> <li>The vaccine has shown improved stability and can be stored for up to 10 weeks at refrigerated 2-8°C conditions.</li> </ul> </li> <li><b>Cannot be stored in freezers at -25°C to -15°C.</b></li> <li>Visit <a href="#">here</a> for updated guidance</li> </ul>
<p><b>Pfizer-BioNTech</b></p> <p>Adult (12+) Vaccine Grey and purple top</p> <p><b>SHIPPED FROM PFIZER</b></p>	<p><b>YES -</b></p> <p>By refilling with dry ice every five days for up to 30 days of storage.</p> <p>Dry ice directions are available <a href="#">here</a>.</p>	<ul style="list-style-type: none"> <li>Ultra-low-temperature freezers, for up to six months.</li> <li>Refrigeration units that are commonly available in hospitals and pharmacies: <ul style="list-style-type: none"> <li>The vaccine can also be stored at -25°C to -15°C (-13°F to 5°F) for two weeks.</li> </ul> </li> <li>Up to one month (31 days) at refrigerated 2-8°C conditions.</li> <li>Visit <a href="#">here</a> for updated guidance.</li> </ul>
<p><b>Moderna</b></p> <p><b>SHIPPED FROM McKESSON DISTRIBUTION SITES</b></p>	<p><b>N/A: Remove from packaging. Once vaccine vials are thawed, they cannot be refrozen.</b></p>	<ul style="list-style-type: none"> <li>Shipped to your location frozen.</li> <li>Can be stored frozen between -50° to -15°C (-58° to 5°F) until the expiration date.</li> <li>Do not store on dry ice or below -50°C (-58°F).</li> <li>Vials can be stored refrigerated between 2° to 8°C (36° to 46°F) for up to 30 days prior to first use.</li> <li>If you believe any vials experienced a temperature excursion, use Temperature Excursion Tool <a href="#">here</a> for further instructions.</li> </ul>
<p><a href="#">Janssen</a></p> <p><b>SHIPPED FROM McKESSON DISTRIBUTION SITES</b></p>	<p><b>Keep the vials in their original package to protect them from light.</b></p>	<ul style="list-style-type: none"> <li>Initially stored frozen by the manufacturer, then shipped at 36°F to 46°F (2°C to 8°C). If vaccine is still frozen upon receipt, thaw at 36°F to 46°F (2°C to 8°C). <ul style="list-style-type: none"> <li>If needed immediately, thaw at room temperature (maximally 77°F/25°C). At room temperature, a carton of 10 vials will take ~4 hours to thaw and one vial will take ~1 hour</li> </ul> </li> <li>Store unpunctured multi-dose vials at 36°F to 46°F (2°C to 8°C) Do not store frozen.</li> <li>Unpunctured vials of the vaccine may be stored between 47°F to 77°F (9°C to 25°C) for up to 12 hours.</li> </ul>

# ORGANIZING VACCINE STOCK

## MINIMIZING RISK FOR VACCINE LOSS

- Review the CDC Toolkit for [Vaccine Storage and Handling](#)
- Organize stock to allow for vaccine that expires first to be used first
- Place water bottles on the top shelf and floor of the refrigerator and in the door racks to help maintain stable storage temperatures
- Avoid placing or storing any items other than vaccines, refrigerated diluents, and water bottles inside storage units
- Store vaccines and diluents in original packaging
- Arrange vaccines and diluents in rows and allow space between them to promote air circulation
- Note the expiration date on vial and updates to expiration date announcements

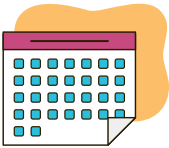


View the [CDC's learning module on vaccine storage and handling](#) to learn more!

# EXPIRATION DATES

**TIP:** Register to access: [CDC's COVID-19 Vaccine Lot Number and Expiration Date Report](#)

The EUA supersedes the expiration date information on the vial.



## Manufacturer Date versus Expiration Date:

The date on the Pfizer orange and grey cap vial is the date of manufacture. This differs from the purple cap formulation vial label.

The date on the purple cap formulation vial label is NOT the expiration date.

Expired vaccine should be discarded regardless of storage conditions.

MANUFACTURER	HOW TO FIND
<b>Moderna (Spikevax)</b>	<ul style="list-style-type: none"> <li>• Scan QR code on the vial or carton</li> <li>• Website: <a href="#">Look up tool</a></li> </ul>
<b>J &amp; J</b>	<ul style="list-style-type: none"> <li>• Scan the QR code on the outer carton</li> <li>• Call 1-800-565-4008</li> <li>• Website: <a href="#">Look up tool</a></li> <li>• The shelf-life extension: updated from 6 months to 9 for inventory due to expire on 3/7/22, or later.               <ul style="list-style-type: none"> <li>• Inventory with an expiration date prior to should be disposed of and reported as waste.</li> <li>• Applies to refrigerated vials held in accordance with manufacturer's storage conditions</li> </ul> </li> </ul>
<b>Pfizer</b>	<ul style="list-style-type: none"> <li>• <a href="#">See EUA fact sheets for providers</a></li> <li>• <a href="#">See Expiry Information for All Three Vaccine Presentations</a></li> <li>• <b>Orange</b> and <b>Grey</b> cap: 6 months after printed manufacture date</li> <li>• <b>Purple</b>: 3 months after printed expiration date if proper storage conditions were maintained.</li> </ul>