

Avoiding COVID-19 Vaccine Waste

Contents:

- [Vaccine Wastage Best Practices](#)
- [Avoidable vs Unavoidable Waste](#)
- [Expiring COVID-19 Vaccine](#)
- [Tips to Reduce Vaccine Waste](#)
- [Vaccine Waste and Potential Countermeasures](#)
- [Manufacturer Contact Information](#)
- [Emergency Use Authorization \(EUA\) Fact Sheet for Health Care Providers](#)
- [Resources](#)

Vaccine Wastage Best Practices:

Our goal is to increase vaccine confidence and for everyone who wants to be vaccinated to have every opportunity to be fully vaccinated once they become eligible.

The Centers for Disease Control and Prevention (CDC) and our partners are doing everything possible to minimize the amount of vaccine that goes unused. Vaccine wastage may increase as the vaccine rollout continues because:

- More providers, including smaller provider sites, are now receiving vaccine
- Vial sizes for some vaccines have increased
- Vaccine vials may be opened without every dose being used

To ensure providers do not miss an opportunity to vaccinate every eligible person, CDC recommends:

- Providers follow clinical best practice for vaccination as well as best practices when managing inventory to maximize vaccination and minimize dose wastage.
- Providers should not miss any opportunities to vaccinate every eligible person who presents at a vaccination site, even if it means puncturing a multidose vial to administer vaccine without having enough people available to receive each dose.
 - Consider establishing and promoting standing vaccination days or half-days to increase the likelihood more people can come for vaccination on the same day.
 - Vaccinate family members or friends who accompany patients to medical visits even if they are not established patients at the vaccinating practice
 - Continue outreach to employers or other community partners that have a large membership or network to arrange vaccination events.
 - As a contingency plan, vaccine providers should attempt to contact additional persons (i.e., from a waitlist or through personal contacts of persons being vaccinated) to use as many vaccine doses as possible.
 - Once punctured, multidose vials must be used within:

- Twelve hours (Moderna)
- Six hours (Pfizer)
- Two hours at room temperature, six hours at 2-8 degrees Celsius (J&J/Janssen)
- Six hours (Novavax)

Avoidable vs Unavoidable Waste:

Some vaccine wastage is unavoidable. Examples of unavoidable waste includes vaccines lost due to natural disasters or equipment failure when the provider has followed their written vaccine emergency polices, including relocating the vaccines to safe storage in a timely manner.

Examples of avoidable wasted vaccine:

- Expired vaccines
- Improper storage and handling
- Equipment failures
- Staff education on vaccine management practices (i.e., stock rotation)
- Ordering patterns (inventory on-hand versus monthly/quarterly use)

Expiring COVID-19 Vaccine:

To minimize the number of unused expired doses and manage expired doses correctly, we encourage jurisdictions and providers to:

- Monitor expiration dates weekly, rotate stock as needed, and follow a “first in, first out” strategy to manage inventory.
- If nearing expiration, check posted manufacturer information for the most up to date expiration/extension information for vaccine lots.
- **Remove expired vaccine from the storage unit immediately.** Do not give staff opportunity to administer expired vaccine.
 - If expired vaccine is inadvertently is administered, it is considered a vaccine administration error and requires remediation including a [Vaccine Adverse Event Reporting System \(VAERS\)](#) report, contacting the recipient to inform them of the error, and may or may not require revaccination based on the [manufacturers’ guidance](#). Guidance on vaccine administration errors can be found in Appendix A of the [Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States](#).
- Vaccine disposal: dispose of the vaccine vial (with any remaining vaccine) and packaging as medical waste according to your local and state regulations. **Do NOT return vaccine in the thermal shipping container.**
- Check your vaccine stock using the [CDC’s Vaccine Lot Number and Expiration Date](#)

[webpage](#).

Tips to Reduce Vaccine Waste:

Share the following tips with providers to assist them in ensuring COVID-19 vaccine doses are not wasted:

- Follow your [emergency vaccine use plan](#) if you need to quickly administer doses of vaccine that would otherwise be wasted.
- [Advertise any doses](#) you can't use before their expiration date on the WAIS Vaccine Advertisement page.
- If a provider location has a few leftover reconstituted doses at the end of the day, consider using them to vaccinate easily accessible qualified individuals in the community interested in receiving vaccine.
- Contact the Department of Health (DOH) at covid.vaccine@doh.wa.gov if you have a large quantity of vaccine vials that you can't use before the expiration date. DOH can help you transfer the doses to another facility.
- Work with the jurisdiction in advance to determine thresholds for the number of vials in danger of being wasted that would trigger a call to the health department for guidance.
- Every effort should be made to coordinate the number of vials needed with the anticipated number of patients when preparing for daily clinics to help reduce over-thawing and transport (when necessary) of vaccine.

Vaccine Waste and Potential Countermeasures:

Potential Causes of Vaccine Waste	Vaccine Type	Potential Countermeasures
Spoiled	Pfizer, Moderna, Janssen, Novavax	Schedule vaccine delivery when appropriately trained staff are guaranteed to be present during a full day receiving hours.
Clinic/pharmacy closing and there are frozen doses left over	Pfizer, Moderna, Janssen, Novavax	If vaccine is thawed and reaching expiration or vials have been opened and there are too few individuals in the target group to be vaccinated, immediately recruit/seek other potential vaccine recipients. This may be necessary as a clinic/pharmacy is closing and has unfrozen vaccine remaining. Develop a call list.
Lost	Pfizer, Moderna, Janssen, Novavax	Staff member should track product daily until arrival. Guidance should be developed regarding tracking parameters, i.e., after 3-5 days contact vendor.

Expired	Pfizer, Moderna, Janssen, Novavax	Determine demand for vaccine to prevent excessive ordering using target population data. Consider staffing and other logistics capacity to give vaccine in timeframe of product storage and shelf life.
Refrigerator/freezer problems	Pfizer, Moderna, Janssen, Novavax	Establish arrangements in advance with other clinics/jurisdictions that can serve as back-up in the event there are refrigeration problems.
		Install/test alarms, auto calls, backup generator.

Potential Causes of Vaccine Waste	Vaccine Type	Potential Countermeasures
Damaged vials	Moderna, Janssen, Novavax	Immediately examine shipment for signs of damage. Vials should be stored in the original carton and protected from light. Call the phone number indicated in the instructions if there are damaged vials.
Damaged vials	Pfizer	Initially, keep the trays closed and inspect only the outside of the package and trays. If you have concerns about the condition of the package, contact the manufacturer . Inspect vials when you are ready to thaw and use the vaccine.
Contaminated	Pfizer, Moderna, Janssen, Novavax	Immediately contact vendor/manufacturer if contamination is identified or suspected. Should have accurate inventory system to determine if contaminated vials have been used. Contact those who received doses from contaminated vials. Separate contaminated product and clearly label "DO NOT USE."
Mislabeled	Pfizer, Moderna, Janssen, Novavax	Develop and follow guidance for daily/weekly inventory check to ensure errors are found. New delivery should be checked within 24 hours. Develop prepared labels.
Power Failure	Pfizer, Moderna, Janssen, Novavax	Have back-up generator to come on during power outage. Follow manufacturer guidance. Develop and follow emergency vaccine storage measures for power outage if no generator. Review the Emergency Vaccine Storage and Handling section in the Vaccine Storage and Handling Toolkit for more information.

Backup generator fails	Pfizer, Moderna, Janssen, Novavax	Implement emergency vaccine storage protocols. Consider what is needed to maintain manufacturer required temperatures. Review the Emergency Vaccine Storage and Handling section in the Vaccine Storage and Handling Toolkit for more information.
Not put in refrigerator/freezer	Pfizer, Moderna, Janssen, Novavax	Develop step-by-step instructions for receiving vaccine shipments; can be a checklist.
Freezer can't reach ultra-cold temps	Pfizer	Must be able to vaccinate within shelf-life parameters.

Potential Causes of Vaccine Waste	Vaccine Type	Potential Countermeasures
Temperature alarm failed	Pfizer, Moderna, Janssen, Novavax	Alarm should be checked consistently on a weekly basis.
Unable to extract all vaccine from vial	Pfizer, Moderna, Janssen, Novavax	Acquire low dead space syringes (in short supply -- look for opportunities to preorder).

Manufacturer Contact Information:

You should contact the manufacturer if you have a temperature excursion to see if the vaccine is still viable.

Manufacturer	Phone Number	Email Address
Pfizer customer service	1-800-666-7248	cvgovernment@pfizer.com
Moderna customer service	1-866-663-3762	Not available
Janssen (Johnson & Johnson) customer service	1-800-565-4008	jscovidtempexcursion@its.jnj.com
McKesson customer service	1-833-272-6634	snsupport@mckesson.com
Novavax customer service	1-844-668-2829	Not available

Emergency Use Authorization (EUA) Fact Sheet for Health Care Providers:

- [Pfizer-BioNTech COVID-19 Vaccine](#)
- [Moderna COVID-19 Vaccine](#)
- [Janssen COVID-19 Vaccine \(Johnson & Johnson\)](#)
- [Novavax COVID-19 Vaccine](#)

Resources:

- [How to Report COVID-19 Vaccine Wastage guide \(PDF\)](#)
- [COVID-19 Vaccine Temperature Excursion Guide \(PDF\)](#)
- [CDC Storage and Handling Toolkit \(PDF\)](#)
- [CDC Identification, Disposal, and Reporting of COVID-19 Vaccine Wastage \(PDF\)](#)
- [CDC Vaccine Administration and Storage and Handling Resources Guide \(PDF\)](#)
- [CDC Packing Vaccines for Transport during Emergencies \(PDF\)](#)

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