

# triangle **times today**



## Pharmaceutical Safety and Vaccine Storage

Health care professionals play a crucial role in vaccine safety, a cornerstone of public health. Proper vaccine storage is essential to efficacy and ensuring patient safety. This article outlines essential requirements and best practices for vaccine storage, based on the CDC's *Vaccine Storage and Handling Toolkit*, updated March 2024.

### Conferences & Exhibits

**Regent Surgical Health  
2025 Regent Surgical Health  
Leadership Conference**  
February 17–19 Nashville, TN

**Southern College Health Association  
2025 Annual Meeting**  
March 10–12, Athens, GA

**Progressive Surgical Solutions  
5th Annual ASC Nurse Leadership  
Conference**  
April 3–4, Dallas, TX

**ASCA Affiliate Pre-Meeting Session**  
*Enhancing Quality: A Practical  
Workshop on Quality Improvement  
Methodologies*  
April 30, Denver, CO

**ASCA 2025 Conference & Expo**  
May 1–2, Denver, CO

[Learn more](#)

Maintenance of the cold chain from the manufacturer to delivery and storage at the providers' practice will ensure potency is maintained. Maintaining an effective cold chain relies on accurate management of inventory, reliable storage and temperature monitoring, and well-trained staff.

Inventory management with the use of inventory accounting starts with a record of vaccines ordered for the patient population with tracking of inventory levels. At least once a month, stock should be counted and expiration dates checked, removing any expired doses. When a new delivery arrives, store vaccines in original packaging and rotate stock based on expiration dates. Ensure that vaccines are organized by type and expiration.

Reliable storage and temperature monitoring protects patients from inadvertently receiving compromised vaccines. Pharmaceutical-grade refrigerators are designed specifically for storage of vaccines and include electronic thermostats, audible alarms, and interior fans. While a household-grade refrigerator may be acceptable, the freezer compartment is not recommended. Store vaccines in the middle of a shelf, away from walls and door compartments, where temperatures fluctuate most frequently. When storing, avoid overcrowding. The majority of vaccines must be stored in refrigerated conditions between 2°C and 8°C (36°F to 46°F). Some vaccines, particularly live attenuated vaccines, require frozen storage at -15°C to -50°C (5°F to -58°F). Refer to the manufacturer's instructions for use when determining temperature requirements.

### 1095 Learn

#### 2025 Achieving Accreditation

- March 20–21  
Renaissance Orlando  
SeaWorld, Orlando, FL
- September 15–17 Virtual
- December 11–12  
Red Rock Casino Resort and Spa,  
Las Vegas, NV

[Learn more](#)



2025 Kershner Quality Improvement Awards  
Apply today!

AAAHC / 1095STRONG



AAAHC / 1095STRONG

Register Now

Benchmarking Studies

## Pharmaceutical Safety and Vaccine Storage (continued)

Checking and documenting temperatures at least twice daily, at the start and end of each workday, is essential with a simple log or continuous monitoring device that automatically logs temperature. Ensure that equipment is calibrated and that there is access to backup devices in case of primary device failure. Having a system that can alert staff to temperature excursions, along with power strip surge protection or uninterruptable power

supply, will support prompt corrective action and mitigate potential for vaccine damage.

Place a sign on or near the refrigerator that provides acceptable temperature ranges and step-by-step procedures in case of temperature instability. Consider backup power sources, transport containers and cold chain equipment, alternative storage locations, and emergency contact information.

Finally, ensure all staff involved in vaccine handling receive training on proper storage and temperature monitoring procedures, documentation requirements, recognition of compromised vaccines, and temperature failure protocols. Implementing best practice guidelines for storage and handling recommendations helps maintain vaccine potency and ensures patient safety, while reducing costs of waste and revaccination.

---

## FAQs Pharmaceutical Safety and Vaccines

---

**Our lab refrigerator is the backup to our medical refrigerator. Can vaccines be stored in the lab refrigerator?**

If the medical refrigerator is used for dual purposes, items must be clearly separated and labeled. Organizations should consider temperature requirements for lab and vaccine storage to ensure correct temperatures are maintained for all contents. See also, the CDC's *Vaccine Storage and Handling Toolkit*.

**Space is always an issue because we have so many vaccines. Is it acceptable to place them in the vegetable bins?**

No, it is not acceptable to place vaccines in the vegetable bins. Vaccines should be placed on the center of the shelves, in the center of the refrigerator, away from the walls and floor of the refrigerator in an open space so that air can circulate around the vaccines.

**What should I do with expired vaccines?**

Remove expired vaccines immediately from storage and contact the manufacturer and/or immunization program before discarding the vaccine.

**Is a "dormitory style" refrigerator considered adequate for storing vaccines?**

No, a "dormitory-style" refrigerator is not acceptable for storing vaccines. The small combination refrigerator/freezer unit outfitted with one exterior door and evaporator plate (cooling coil) poses a significant risk of freezing vaccines even when used only for temporary storage.

**Can we store vaccines in the same unit where we store employees' lunches?**

No, vaccines should not be stored in the same refrigerator as employee lunches. Vaccine efficacy relies on constant temperatures. Frequent opening of the refrigerator door can adversely affect the internal temperature.

## Emergency Drills Top Deficiency in 2024 Roadmap

Results from the 2024 AAAHC *Quality Roadmap*, culled from v42 surveys, illustrate that emergency preparedness continues to be a deficiency in both primary care and surgical/procedural settings.

Deficiencies with emergency preparedness Standards place patients, staff, and visitors at risk in emergency situations and are a potential liability for organizations. Organizations must address these issues promptly and on an ongoing basis to ensure compliance with Standards and delivery of high-quality patient care in a safe environment.

### Intent of the Standard

The purpose of these Standards is to ensure that organizations are prepared for all types of emergencies (e.g., CPR, fire, active shooter, and natural disasters, such as earthquakes and pandemics) and can provide safe exits for patients and staff. As part of their internal and external emergency and disaster preparedness plan, organizations should conduct scenario-based drills on a quarterly basis.

Using case-based scenarios to represent a “real world” emergency allows an organization to concurrently assess emergency action plans and teams’ readiness to respond to real emergencies. Involvement of all relevant staff in these activities is essential to preparedness.

**Click here to download the 2024 AAAHC *Quality Roadmap* for complete results and analysis.**

## Maintaining Dental Unit Water Lines

Dental unit waterlines (DUWLs) are a critical component of any dental practice, but they can also harbor harmful bacteria if not properly maintained.<sup>1</sup> Biofilm, a complex community of microorganisms, can form within these lines, potentially exposing patients to contaminated water.<sup>2</sup>

To ensure patient safety, dental professionals must prioritize DUWL maintenance.<sup>1</sup> Best practice includes regular discharging of air and water for a minimum of 20–30 seconds from any device that entered the patient’s mouth and that is connected to the dental unit water source.<sup>3</sup> This simple step helps to remove stagnant water and reduce the risk of biofilm accumulation.

In addition to flushing, chemical treatments are essential for controlling bacterial growth.<sup>1</sup> Dental professionals should follow the manufacturer’s instructions for their specific dental unit and water treatment products. Regular testing of water quality is also crucial to verify the effectiveness of the maintenance protocol.<sup>1</sup>

AAAHC’s Infection Prevention and Control and Safety (IPC) Standards require that organizations have policies that address the cleaning of patient treatment and care areas. Such policies should address waterline maintenance and testing requirements. By adhering to these guidelines, dental practices can minimize the risk of waterborne infections and provide a safe environment for their patients.

### References:

1. <https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/best-practices-dental-unit-water-quality.html#:~:text=Dental%20unit%20waterlines%20should%20be,regulatory%20standards%20for%20drinking%20water&text=Dental%20unit%20water%20quality%20must,recommended%20by%20the%20equipment%20manufacturer.>
2. <https://www.ada.org/resources/ada-library/oral-health-topics/dental-unit-waterlines>
3. <https://odha.on.ca/wp-content/uploads/2020/01/10.-OSAP-White-Paper-Dental-Water-Quality.pdf>