

Best Practice Guideline	Storage of Clean and Sterile Supplies
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Site Applicability

Acute, Long-Term, Ambulatory, and Community Care.

Purpose

To prevent contamination of clean and sterile supplies in healthcare settings.

Background

- Clean and sterile supplies are stored in controlled, designated clean supply areas and at point of care to facilitate timely access in high acuity or emergent situations.
- Supplies and equipment that will be in direct contact with a patient or penetrate the body present a risk for infection transmission within healthcare settings.
- Storage, handling and transport of clean and sterile supplies in healthcare facilities should be in line with Canadian Standards Association requirements.

Procedure

1. Handling & Transport

- Always perform hand hygiene before accessing clean or sterile supplies:
 - When unpacking clean or sterile supplies.
 - Before transport to or stocking of clean supply storage areas.
 - On entry to clean supply rooms.
 - Before accessing supplies stored in high traffic areas or on supply carts (e.g., glove boxes, clean gown hampers, clean linen carts, blanket warmers).
 - Before accessing any clean supply storage within the patient care environment (e.g., supply cabinets/drawers in exam/procedure rooms and OR theaters, clean supply



stock on IV trays or in ER cubicles, bedside carts in critical and intensive care environments).

- Handle supplies as little as possible.
- Remove items from shipping boxes before storage to prevent contamination with soil/debris from packing container.
- Replace the inner dispensing boxes (e.g. single layer cardboard glove, mask or syringe boxes) of single use medical devices when empty. Do not top up.
- Transport clean and sterile supplies to storage areas in labelled, cleanable, enclosed or covered carts, bins, and totes, or plastic bags.
- Do not toss, throw or drop supplies.
 - Discard or reprocess any item dropped on the floor. Dropping supplies onto the floor can create enough force to push bacteria and dust into package without creating any visible indication of compromise.
- Handle, transport and store clean and sterile supplies separate from dirty supplies.
- Maintain integrity of package until the point of use.

2. Inventory Management

- Have a stock rotation system (e.g., first in first out).
- Do not over stock.
 - Only remove enough supplies for immediate use (e.g., PPE) as supplies made accessible at point of use (e.g., supply carts) should not be placed back into the storage area.
- Assess infrequently used packages to determine whether they are still needed and/or if they could be consolidated to reduce their numbers (e.g., by keeping them in a central location).
- Do not return supplies that have been decanted to supply carts or cabinets back to the clean storage area.
- Minimize supply storage in patient rooms/care areas.
 - On patient discharge, discard or reprocess all unused supplies that were taken into the patient room or within 2 meters of a patient.
 - Any multi-patient supply storage in patient care areas should be protected with a barrier (cabinet with doors, closed carts, or in a drawer) and always accessed with clean hands.
 - Refer to the IPAC Best Practice Guidelines for Management of Patient Supplies on Discharge or Transfer.



3. Storage Area

- Store clean and sterile supplies in a designated area that is separate from other areas and is clean and dry, protected from dust, vermin, moisture (acceptable range 30-60 % relative humidity) and temperature extremes (acceptable range 18-23°C).
- Clean storage rooms are separate from and have no direct connection with contaminated items or soiled utility rooms.
- Alcohol-based hand rub at entrance to clean/sterile storage on opening side of door.
- Door to clean storage area to remain closed.
- Restrict access to clean storage areas to minimize traffic. If supplies are located in a large storage room, place sterile supplies away from doorways and high traffic areas.
- Surfaces in storage areas, including floors, walls, ceilings, shelving and fixtures, are made of materials that are smooth, non-porous, non-shedding, and easily cleanable.
- Separate sterile from non-sterile supplies with a functional barrier (e.g., drawer, bin or shelf). Store sterile items above clean items to reduce the risk of lint, dust and other debris falling from clean items onto sterile items.
- Arrange supplies in a manner that prevents crushing, bending, compressing or puncturing the package.
- Store liquids on or near the bottom shelf.
- Do not store clean or sterile items:
 - on the floor
 - under a sink
 - on a windowsill
- Store supplies away from windows and air vents.
- Items not permitted in clean and sterile supply storage areas include:
 - Any item that is contaminated with blood or body fluids or has been in contact with a patient or patient environment and has not been cleaned/disinfected
 - Kitchen and food items (e.g., electric kettle, dishes/utensils, food supplies)
 - Patient's personal items
 - Staff personal items (e.g., jackets, backpacks)

4. Storage Materials

- Shelving:
 - Select materials that are non-porous, non-shedding, easily cleaned, free of burrs and sharp or rough edges



- Open shelving may be used if the area has limited access, is designated for supply storage, and is regularly cleaned and disinfected, otherwise select a closed cart or cabinet option.
- Ensure top and bottom shelves of a shelving unit are impervious and:
 - 25 cm (10 in) off the floor to permit routine cleaning
 - 45 cm (18 in) in from the ceiling to ensure adequate functioning of fire extinguishers
 - 5 cm (2 in) in from an outside wall to eliminate moisture damage created by temperature changes
- Bottom shelves are solid, without holes to prevent dust contamination.
- Items stored on the top shelf are protected from moisture and dust. Consideration is given to solid top shelving, protective covers and placement of items in covered containers on the top shelf.
- Cabinets & Carts:
 - Cabinet or cart surfaces have cleanable, smooth, and non-porous surfaces tolerant of VCH-approved cleaning/disinfecting products.
 - Choose closed or covered cabinets and carts.
 - Clearly label closed cabinets and carts. Consider glass or transparent cabinet doors.
 - Supply carts used at the bedside should be emptied and restocked on patient discharge. If supply carts in the patient room or a procedure room are used for supplies shared between patients, they must:
 - Only be accessed with clean hands
 - Be externally cleaned on patient discharge and on a regularly scheduled basis
 - Emptied and internally cleaned on a regularly scheduled basis
 - Not be used as a work surface for patient care activities
 - Emptied and restocked on patient discharge if there was any concern for contamination of supplies within (e.g., accessed with contaminated hands or inadvertently left open in an emergent situation)
- Bins:
 - Always use impervious, smooth, cleanable bins for storage.
 - Never store clean or sterile supplies in outside shipping cartons or corrugated cardboard boxes. Corrugated cardboard boxes are porous and cannot be cleaned.

5. Inspection

- Check package integrity prior to use (e.g., no punctures, no evidence of water stains or water damage).



- Consider supplies sterile unless package is damaged or dropped.
- Check for manufacturer expiry date as some materials can deteriorate over time (e.g., latex rubber).
- Discard or reprocess if the package integrity is compromised.

6. Cleaning

- Storage areas kept clean and free of visible soil, including dust.
- Clean storage areas on a regularly scheduled basis, including storage cabinets, carts and bins.
- Clearly designate cleaning responsibility.
- Follow written procedures for the cleaning and maintenance of clean and sterile supply areas.
- Cleaning logs should be dated with time and signed after every cleaning.
- The department responsible for performing any of the cleaning-related tasks:
 - ensures their staff have the necessary training, equipment, resources and supervision
 - staff completes infection control training (minimum on-hire and annually): Infection Prevention and Control module on CCRS
 - monitors, and documents training
 - maintains training records
- Covered or concealed sprinkler heads are not exposed to dust and can be routinely cleaned when the ceiling is cleaned.
- Consult Facilities Maintenance and Operations (FMO) before cleaning open sprinkler heads as sprinklers may be activated during the cleaning process. If FMO approves, compressed air in a bottle may be used to clean open sprinkler heads. Supplies must be protected from exposure to dust during the cleaning process.



References

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2. BC Ministry of Health. (2011). Best Practice Guidelines for Cleaning, Disinfection and Sterilization of Critical and Semi-Critical Medical Devices in BC Health Authorities.
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5. Public Health Agency of Canada. (2012). Routine Practices and Additional Precautions for Preventing Transmission of Infection in Healthcare Settings. Retrieved from: http://publications.gc.ca/collections//collection_2013/aspc-phac/HP40-83-2013-eng.pdf

