

Patient Room Disinfection

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Training Library Workbook



RESOURCE & PROCESS MANAGEMENT™

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Glossary

Section 1.

Introduction to Patient Room Disinfection



With today's onset of antibacterial products and modern scientific advancements, one would assume that the fight against infection would be a diminishing battle. In actuality, it just means that new, more resistant, disease-causing microorganisms are evolving. One major area for concern is health care facilities. Hospital acquired infections often referred to as nosocomial infections, rank among the 10 most frequent causes of death in the United States. Interest in disinfectant efficacy has increased in response to the growing numbers of nosocomial infections as well as to the number of immune deficient patients, who are susceptible to infections.

Proper disinfection is extremely important to limit and control the growth of microorganisms and the spread of infection. Your job is critical in controlling the spread of harmful organisms and in turn creating a healthier environment ...which may even save someone's life.

This training module, which is one in the Betco Resource and Process Management™, or RPM Library series, focuses on procedures and recommendations for proper disinfection of a patient room in a hospital or long term care facility.

The module will cover:

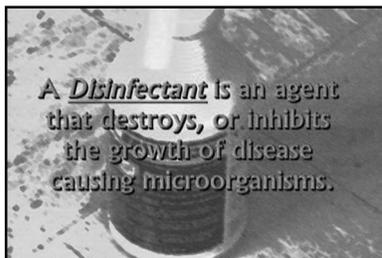
- Types of Disinfectants
- Safety Precautions
- Preparation
- Patient Room Daily Clean - Occupied
- Patient Room Daily Clean - Occupied/Isolation
- Patient Room Detail Clean - Discharge
- Patient Rooms - Project Cleaning
- Cleanup Procedures

Betco has over 300 specialty cleaning products and a full line of equipment and accessories. We recommend the following Betco cleaning system to assist in disinfecting areas for patient rooms:

- **Quat-Stat™** - broad-spectrum disinfectant excellent for meeting the requirements of the OSHA Bloodborne Pathogen Standard.
- **Deep Blue** - or Clear Image glass and surface cleaner.
- **Glybet™** - disinfectant spray.
- **Winning Hands® Premium Antibacterial Hand Cleaner**
- **pH7** - All Purpose Neutral Cleaner for vents light fixtures and porous surfaces.

Section 2.

Types of Disinfectants



A disinfectant is an agent that destroys, or inhibits the growth of disease causing microorganisms. Hospital disinfectants must be efficacious against Staph., Salmonella and Pseudomonas.

It is important to understand the different types of disinfectants that are available.

The most popular types of surface disinfectants are:

- Synthetic phenols
- Quaternary ammonium products, commonly referred to as quats
- Chlorine, also called bleach
- Iodine
- Alcohol

Synthetic phenols kill a wide range of organisms and are widely used in operating rooms. They are excellent products for destroying the tuberculosis organism and do not lose their effectiveness in a soiled environment. They are corrosive and should never be used around newborns.

Quats are the most widely used disinfectant used in the market today due to their versatility and cost effectiveness. They kill a wide range of microorganisms including Staph, Salmonella, and Pseudomonas. Quats are less corrosive and are used in schools, institutions, supermarkets and hospital settings.

Hypochlorite/Bleach is corrosive and should be restricted in use. It should not be used in general building operations because of the potential of interacting with other chemicals, which can result in a toxic gas. Although it can be used as a disinfectant or sanitizer, it is not an effective cleaner. Never mix bleach with another chemical.

Iodine is a powerful disinfectant that, when used in the form of iodophors, will kill a wider range of pathogens than quats and phenolics. As a primary use disinfectant it is not desirable due to its staining properties. Because of iodine's acidic qualities, its use is restricted to specialized areas, such as surgical settings.

Alcohol provides an efficient means of killing pathogens. Typically, ethyl or isopropyl alcohol is used for smaller area surface disinfection. These products are usually packaged in sealed aerosols or smaller-use containers, since alcohol can pose a fire hazard.

See glossary for further definitions on page 18



Disinfecting reduces the risk of cross-contamination. Most germs must hitchhike to get around and since we touch so many surfaces throughout the day, the likelihood that we will pick up germs is virtually guaranteed. Be aware that a microorganism can hitchhike in various ways. Skin to skin, on materials such as laundry or sponges, droplets from coughing and sneezing, airborne dust particles, food, water and insects or animals are all ways that infectious microorganisms can be transmitted.

Section 3.

Safety Precautions



Before beginning with any cleaning task be sure that you fully understand how to use the chemicals and equipment required for the job. It is regulated by OSHA that every employee has a right to know about chemical hazards within their workplace. A Material Safety Data Sheet, commonly called an MSDS will provide information regarding the chemicals within your building. Read and understand the MSDS, as well as the product label for every product that you use. Your supervisor will show you where to find your MSDS information and will also help you to read and understand each sheet.

Be careful not to use cleaning chemicals on any surface for which they are not intended. Be especially cautious when using acid cleaners. Never mix chemicals, it could cause serious or even fatal injury.



Practice universal precautions when cleaning any blood or body fluid spills, or soiled materials that could contain these or other potentially infectious substances. Refer to OSHA's Bloodborne Pathogen standards for more information. Betco provides a Bloodborne Pathogen training module within the RPM Training Library series.

Accidents will be limited when the proper caution signs are posted prior to cleaning, such as "Wet Floor" signs.

Always wear the proper Personal Protective Equipment or PPE to protect yourself from exposure to cleaning chemicals. Gloves and a mask, or goggles will prevent chemical splashes from coming into contact with your skin and eyes.

In hospitals, direct contact is the most common mode of transmission. One of the best ways to reduce cross-contamination, besides proper disinfection, is frequent hand washing. The physical action of hand washing will greatly reduce the number of bacteria on the skin, and reduce the chances of cross-contamination. The less contamination, the healthier the environment.



Section 4. Preparation



Review your supply checklist and gather the proper cleaning equipment such as gloves and goggles, paper supplies, properly labeled cleaners, a high dusting tool, dry mop with handle, dust pan and brush, mop and bucket with wringer, caution signs and any other applicable supplies.

A supply checklist can be found on page 14

Be sure that the correct dilution rates are used according to manufacturer's recommendations. Betco Chemical Management Systems ensure that dilution rates are correct and make your job faster and easier.

Always prepare disinfectant solutions fresh daily or more often if a solution becomes visibly diluted or soiled in order to ensure their effectiveness.

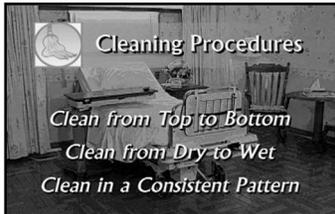
Section 5a.

Patient Room Daily Cleaning - Occupied



Never push your cleaning cart into the room. Take only the supplies and equipment needed for the task.

Always knock and greet the patient and his or her visitors in a friendly manner and identify yourself explaining why you are there. It is important to excuse yourself if a doctor, nurse, minister or other clinical person is in the process of any type of procedure or discussion. Explain that you will come back at a more convenient time.



Remember these 3 simple rules for cleaning:

1. Clean from top to bottom. Bringing soil to the lowest level as you go about your routine.
2. Perform dry procedures before wet procedures, such as waste removal and paper refilling before wiping and mopping.
3. When wiping, clean in a consistent pattern such as up and down then back and forth, to ensure that you cover an entire surface. Be sure to overlap your strokes.



First, empty the trash and bring the filled liner to your cart for disposal. Never compress the trash in case there are hidden sharps or contaminated materials inside. Spray the inside and outside of the receptacle with a spray disinfectant such as Glybet™ and replace with a clean liner.

If housekeeping is responsible for infectious waste receptacles, be sure to empty them according to hospital procedure. Follow Bloodborne Pathogen Universal Precautions for clean up of any spills or spatters. Report any damage or leakage to your supervisor.

Check all paper dispensers. Clean and refill them, as needed. Damp wipe the dispenser with a disinfectant.



Betco's broad spectrum disinfectant Quat-Stat™ can be utilized for all disinfecting in a Patient Room.



Spray the outside of the toilet and sinks with a disinfectant. Move on to the next task allowing the disinfectant to sit for 10 minutes. It is important to come back and wipe up overspray after the 10 minute contact time. Be sure not to let anyone enter the area until you have wiped.

Damp wipe the outside of all furniture (except the patient's bed). Use a disinfectant on all hard nonporous surfaces such as window ledges and counters. Use a neutral cleaner on porous surfaces. Do not open drawers or disturb the patient's belongings. Where it is necessary to move newspapers, magazines, flowers or other articles in order to clean, be sure to handle them with care and return them to their original location. Never discard the patient's personal belongings.



Beginning at the door and working clockwise around the room, spot clean all visible soil from walls with a disinfectant. Damp wipe door knobs, hand rails, light switches and push plates with disinfectant. Be sure to thoroughly damp wipe the phone, cord and dial plate. *Do not wipe directly over the patient.* This includes the over-bed light.

Cleaning cloths should be changed frequently to avoid cross-contamination.

Return to the restroom and follow Betco Resource and Process Management™ Restroom Sanitation procedures.

As an additional precaution, use a spray disinfectant, such as Glybet™ on areas that people continually touch such as door knobs, push plates and hand rails.

Post "Wet Floor" caution sign and begin to dry and wet mop the floor from the farthest corner to the door. Collect the dirt and debris in a dust-pan at the door and dispose of it in your cart's trash bag. Use a disinfectant solution for wet mopping. If there is carpeting, vacuum traffic areas.

Properly remove your gloves. Wash your hands thoroughly using plenty of soap, such as Betco's Winning Hands® Premium Antibacterial Hand Soap.

Before leaving the room make a final inspection to be sure that furniture and patient belongings are in their original location. Also check to make sure that you did not leave any spray bottles, bags or equipment.

Let the patient, family or visitors know that you are finished and thank them. Remind them that the floor will be slippery until it is completely dry and ask them to be cautious.



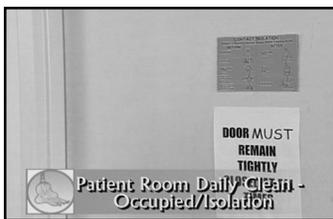


It is important to get into the routine of cleaning the room in the sequence indicated in this training. In addition to saving time, working the same way each time will reduce the chances that you might overlook a task or area.

Change the disinfectant solution in the mop bucket if it is visibly soiled or diluted or if there is a bloodborne pathogen risk or if you used it in an isolation room, otherwise change the solution every third room.

Section 5b.

Isolation Patient Rooms - Daily Cleaning - Occupied



When cleaning an isolation patient room, always follow the protocol for your hospital.

Often, signs are posted on the doors to indicate what Personal Protective Equipment is required. Remember to practice Universal Precautions. This, in combination with the PPE ensures your personal safety as well as the patients.



Clean the room as you would any other occupied room with the following exceptions:

- Immediately bag all cloths, wet mop heads, and dust mop heads used in the room as infectious waste. **DO NOT** use them in any other area.
- Properly remove any gloves, gowns, or masks after you have cleaned the room and dispose of them in the proper waste receptacle immediately after leaving the room.
- Wash your hands thoroughly.
- After cleaning the room, decontaminate any equipment that has been visibly soiled such as mop handles, buckets and castors with disinfectant.
- Thoroughly rinse out the mop bucket and wringer and replace with clean water and disinfectant before cleaning the next area.



Section 5c.

Patient Room Detail Clean

Discharge (Regular & Isolation)



Once the patient has been discharged, additional cleaning procedures are required.

First, check the room for personal belongings that the patient may have left in the room. If you discover any, carefully place them into a plastic bag, secure and label. Take the bag to the nurse's station.

Follow the daily occupied patient procedures but add the following tasks to your cleaning:



Beginning at the door of the room, move clockwise around the room, dust everything above shoulder height with a high dusting tool, finishing back at the door.

Using a disinfectant, spot clean all visible soil from the walls, window sills, blinds and other vertical surfaces, including door frames.



Over-bed lights are major dust collectors and are prime sites for the transportation of dust particles onto the patient. Before cleaning the over-bed light, turn the lamp off. Damp wipe using a disinfectant and a clean cloth.

Report any burned out bulbs or any other visible problems such as broken furniture or damaged fixtures to maintenance.

To clean the over-bed table, wipe the tray top, inside drawer and underside with a disinfectant. Wipe down the legs, base and wheels of the table. Remove any hair from the wheels.

Handle linens and bed making according to procedure.



Damp wipe the entire bed with a disinfectant including the frame, headboard and footboard. Clean all sides of the mattress according to manufacturers recommendations, and turn it. Fold it back so that you can wipe off the springs underneath. Raise the bed up and carefully wipe off all areas underneath. Be especially careful to clean the casters as well.



Thoroughly clean the patient locker with a disinfectant. Be sure to wipe all corners and edges carefully.

Damp wipe the TV control unit with disinfectant. Never spray the controls directly.

Spray and wipe all chairs and other furniture. Be sure to read label before spraying certain surfaces. Follow cleaning procedures for fabric chairs.

Clean mirrors and windows with glass cleaner such as Betco's Clear Image.

Clean visible soil from the entrance door, door frame, kick plate, chart holder, room sign and the general vicinity of the entrance.

Clean the restroom according to restroom sanitation procedures.

Dust mop the floor followed by wet mopping with disinfectant. Pay close attention to baseboards, corners and underneath furniture.

Properly remove gloves and wash your hands.

Make a final inspection of the room. Notify the appropriate person that the room is clean and ready for the next admission.



Section 5d. Patient Room - Project Cleaning



Project cleaning is usually completed in conjunction with detail cleaning of the room, anywhere from once a month to once a quarter or even biannually, depending on the facility's needs. Betco's Resource and Process Management™ will assist your facility to establish a schedule for project cleaning as well as detail cleaning. In addition to the tasks listed for detail cleaning procedures, the following activities may be included as project cleaning for patient rooms:

- Strip and recoat hard floors
- Scrub and recoat hard floors
- Carpet bonnet cleaning or extracting
- Grout scrubbing restroom tile
- Clean all vents and grills with Betco's pH7 All Purpose Neutral Cleaner
- Wipe down ceiling and walls

Betco provides the complete bundle for any of these cleaning procedures including a full line of equipment such as autoscrubbers, carpet extractors, floor machines, vacuums, grout scrubbers and pads.

Section 6. Cleanup Procedures



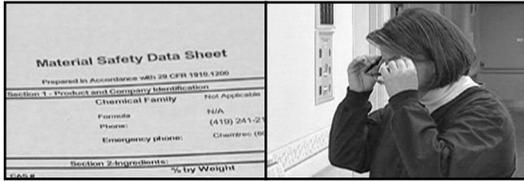
When finished with all necessary procedures and all surfaces are dry, remove any posted signs.

Bag the soiled mops for daily laundering. Never leave them sitting in buckets.

Remember to disinfect the used cleaning equipment as well. Disassemble and disinfect on a routine basis with Quat-Stat™.

Section 7.

Summary



In reviewing what has been discussed in this training you have learned the following:

Understand product labels and MSDS Sheets.

Wear the proper Personal Protective Equipment (PPE).

Follow OSHA's Bloodborne Pathogen Standard with regard to blood and body fluid clean-up.

Review supply checklist and stock your cart.

Post the proper caution signs before cleaning.

Follow a routine for cleaning.

Remember these three rules when cleaning a patient room:

1. Always clean top to bottom.
2. Clean from dry to wet.
3. Wipe in a pattern.

Know your daily, detail and project cleaning procedures and when to perform them.

Wash your hands after cleaning a patient room.

Be sure to always clean up and wash your equipment at the end of your shift or at the end of a workday.

The service you provide is very important to the well-being of patients, visitors, staff and yourself. Be proud of the skills you are developing and know that you truly make a difference in creating a clean and healthy environment.



Section 8.

Supply Checklist

Patient Room Disinfection

Betco Products:

- Glass cleaner - Deep Blue*
- Spray disinfectant - Glybet™*
- Hand cleaner - Winning Hands® Premium Antibacterial*
- Disinfectant - Quat-Stat™*
- Neutral cleaner for periodic cleaning - pH7 All Purpose Neutral Cleaner*

Items

- Trashcan liners
- Cleaning cloths/sponges
- Dust mop
- High duster
- Wet mop
- Mop bucket and wringer
- "Wet Floor" signs
- Dust pan and broom
- Paper products

PPE

- Gloves
- Goggles

Section 9. Certification Exam

The following exam will certify you as an official Betco Patient Room Disinfection Specialist. Please take the time to complete the exam. Fax or mail completed exam to:

Betco Corporation
P.O. Box 3127
Toledo, OH 43607
Fax # 419-321-1954
Attn: Marketing

Exams that are returned to Betco with a grade of 80% or better will receive a certificate of completion. Exams can also be taken on-line at www.betco.com.

To earn .20 continuing education units (CEU), please mark the box on the information form. Exams will then be forwarded to IEHA for accreditation. IEHA will send certificates directly to the contact.

Please fill out the following information and return it with your completed exams:

Your Name: _____

Company Name: _____

Address: _____

City _____ State _____ Zip Code _____

Phone: _____

E-mail address: _____

Signature: _____

Please forward my exam scores to IEHA for Continuing Education Units.

IEHA Course #10606x .20 CEU's



Section 9. Certification Exam

PATIENT ROOM DISINFECTION IEHA Course Number: 10606x Credit Hours: .20 CEU's

1. Proper disinfection is extremely important because:
 - It creates a good smelling environment
 - It limits and controls the growth of microorganisms and the spread of infection
 - It helps make cleaning easier

2. A disinfectant is an agent that destroys or inhibits the growth of:
 - Disease causing microorganisms
 - Quaternary ammonium products
 - Airborne dust particles

3. When cleaning any blood or body fluid spills it is important to:
 - Clean the area very well
 - Practice Universal Precautions
 - Let the area soak in cleaning solution overnight
 - Ask your supervisor to handle it

4. An infection that is acquired while in a hospital is referred to as:
 - Germicidal
 - Nosocomial
 - Immune deficient
 - Antibacterial

5. Disinfectant solutions should be prepared on a weekly basis.
 - True
 - It depends
 - False

6. Which is not one of the three cleaning rules you should follow when cleaning a patient room?
 - Clean from top to bottom
 - Perform dry procedures before wet procedures
 - When wiping, clean in a consistent pattern
 - Spray disinfectant on all surfaces

7. Which is not a type of hard surface disinfectant?
 - Synthetic phenols
 - Quaternary ammonium
 - Antiseptic
 - Iodine

8. When using cleaning cloths or sponges to disinfect a patient room, it is important to:
 - Change them frequently to avoid cross contamination
 - Rinse them out with warm water between tasks
 - Soak them in a mop bucket for ten minutes

9. What should be done after allowing for the ten minute contact time after spraying toilets and sinks with disinfectant?
 - Come back and wipe up the overspray
 - Rinse them out with warm water between tasks
 - Leave the disinfectant on a few minutes longer if there is gross soil

10. Which Betco product is most appropriate for disinfecting a patient room?
 - Deep Blue
 - Quat-Stat™
 - Cide-Bet
 - Stix™

11. Before wet mopping a patient room, what should you do first?
 - Post "Wet Floor" caution sign
 - Spray the floor with disinfectant
 - Remove all furniture

Section 9. Certification Exam (cont.)

PATIENT ROOM DISINFECTION IEHA Course Number: 10606x Credit Hours: .20 CEU's

12. All trash should be handled as infectious waste when cleaning an isolation room.
- True
 - False
 - It depends
13. How often should you change disinfectant solution in your mop bucket when cleaning a patient room?
- Every third room
 - When it becomes visibly soiled
 - After every isolation room
 - All of the above
14. Which type of product would you most likely use to clean a bloodborne pathogen spill?
- Disinfectant cleaner
 - Glass and surface cleaner
 - Odor counteractant
 - All of the above
15. Which procedure would you most likely do only when cleaning a discharged room?
- Dust Mop
 - High dust lights and corners
 - Empty trash
16. Which procedure would you most likely do on a daily basis in a patient room?
- Wipe down the bed frame with disinfectant
 - Clean the locker
 - Damp wipe doorknobs, hand rails, push plates and light switches with disinfectant
 - Clean windows and blinds
17. Which is an example of a project-cleaning task?
- Spraying toilets and sinks with disinfectant
 - Scrub and recoat floor
 - Spot cleaning walls and doors
18. If you are unsure of how to use a cleaning chemical you should:
- Call an administrator from the hospital
 - Read the label and MSDS
 - Use a different cleaner
19. What can you do to reduce your risk of being cross contaminated from microorganisms?
- Take a hot shower after work
 - Read more training material
 - Wash hands frequently
20. After learning about Patient Room Disinfection you should be:
- More knowledgeable
 - Proud
 - Helpful in creating a safe and healthy work environment
 - All of the above

Appendix

Glossary of Common Terms Associated with Patient Room Disinfection

"Bloodborne Pathogens" - pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV-1).

"Contaminated" - the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

"Contaminated Sharps" - any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.

"Cross-contamination" - the process of passing bacteria or viruses indirectly from one patient to another through the use of improper sterilization procedures, unclean instruments or recycling of products.

"Daily Cleaning" - procedures performed on a daily basis such as emptying trash and dust mopping.

"Decontamination" - the use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

"Detail Clean" - cleaning procedures performed 4 to 12 times per year such as vent cleaning, grout scrubbing and wall washing.

"Disinfectant" - an agent such as heat, radiation or chemical that destroys neutralizes, or inhibits the growth of disease carrying microorganisms.

"Disinfection" - the process of cleansing as to destroy or prevent the growth of disease carrying microorganisms.

"Efficacy" - the measure of a disinfectant to produce its desired effect.

"Infectious Materials" - (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

“Nosocomial Infection”- an infection acquired in the hospital by either a patient or health care personnel.

“Project Cleaning”- extensive cleaning procedures performed 1 to 4 times per year such as stripping and refinishing the floors and carpet extraction.

“Personal Protective Equipment” (PPE) - specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

“Universal Precautions” – a concept of bloodborne disease control which requires that all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

“Synthetic Phenols” – kill a wide range of organisms and are widely used in operating rooms. They are excellent products for destroying the tuberculosis organism and do not lose their effectiveness in a soiled environment. They are corrosive and should never be used around newborns.

“Quats” – the most widely used disinfectant used in the market today due to their versatility and cost effectiveness. They kill a wide range of microorganisms including Staph, Salmonella, and Pseudomonas. Quats are less corrosive and are used in schools, institutions, supermarkets and hospital settings.

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