

Infection Prevention Control (IPC) Topic: Infection Control in Chemotherapy

Intro: (1) Patients who get chemotherapy treatments are at an increased risk of infections that can lead to serious illnesses. This is due to a weakened immune system due to the disease and medications they take. Patients with cancer come into frequent contact with healthcare settings and can be exposed to other patients in these settings with contagious infections. Given the increased risk for these patients, infection control is so important for their health.

What is the Risk? (2,7) Germs live in and on the body, these are called reservoirs. Pathways are defined as the way in which germs spread. A common reservoir is our skin and blood. A common pathway is touch. Cancer patients can have weakened immune systems, which make them more vulnerable to infection. Cancer patients also frequently have vascular indwelling access (e.g., PICCs, tunneled catheters, implanted ports), which can be opportunities for germs to spread.

Highlights: Let's go over some elements of Standard Precautions and how we can put these into practices to help stop the spread of germs.

- **Hand Hygiene (14)**

- Alcohol-based hand rub is the preferred method for cleaning your hands in most clinical situations. Soap and water should be used when hands are visibly soiled (e.g., dirt, blood, body fluids), and when caring for patients with known or suspected infectious diarrhea or norovirus.
- Clean your hands before putting gloves on, and after taking them off.
- Clean hands before drawing up an injectable medication or accessing a port or central venous device.

- **Personal Protective Equipment (PPE) (11)**

- Gloves

- ❖ Use gloves when there could be contact with blood, body fluids, mucous membranes, nonintact skin or contaminated equipment.
- ❖ Clean hands before putting gloves on, and after taking gloves off.
- ❖ When selecting gloves, follow current guidelines for handling hazardous materials and meet facility policy when and if to double glove.

- Gowns

- ❖ Use a gown to protect skin and clothing when splashes or sprays are possible.
- ❖ Do not use the same gown for the care of more than one patient, use a new gown for every encounter.
- ❖ Remove gown and perform hand hygiene before leaving the patient's room or area.
- ❖ When selecting gowns, follow current guidelines for hazardous materials and meet facility policy.

- Procedure or Surgical Masks
 - ❖ Use when there is risk for splashes or sprays of blood or body fluids, including respiratory droplets.
- Eye Protection (Goggles, Face Shields)
 - ❖ Use eye protection when there is risk for splashes or sprays of blood or body fluids, including respiratory droplets or secretions.
- **Injection safety (8, 12, 13,11)**
 - **DO's**
 - Whenever possible, use pharmacy-prepared prefilled syringes.
 - Saline and heparin for example.
 - Perform a second at minimum a 30 second "scrub" to the access ports of IVs or vascular access devices with sterile alcohol pad.¹³
 - Adequately scrubbing the hub depends on the agent you use, appropriate contact and drying time, and—most important—friction. These used together help to kill the germs.
 - Cleanse the top of medication vials with 70% alcohol prep pad and allow the alcohol to dry before accessing. This gives the alcohol time to kill any germs on top of the vial.
 - **DO NOT's**
 - Avoid prefilling and storing prepared syringes.
 - Prefilled sterile syringes should not be unwrapped prior to use.
 - Never administer medications from the same syringe to multiple patients, even if the needle is changed, because germs can spread through blood reservoir.
 - Do not reuse a syringe to enter a medication vial or solution. Unless it is stated it is a multi-dose vial per manufacturer.
 - Do not administer medications from single dose/use vials to more than one patient.
 - Do not use a bag of saline for multiple patients.
- **Cleaning and disinfecting (10)**
 - Clean and disinfect patient chair, IV poles/pumps, and side table between each patient use, when patient is not present.
 - Focus cleaning on high touch surfaces regularly (more often if facility policy states) such as:
 - IV poles, patient chairs, exam tables.
 - Follow manufacturer's instructions for cleaning and disinfecting environmental surfaces and medical devices; ensure that the cleaning product used is compatible with the surface or device being cleaned.
 - Clean and disinfect any medication prep area after each patient encounter.
 - When selecting gowns and gloves (PPE) follow current guidelines for hazardous materials and meet facility policies.

Summary: Chemotherapy is an area where hand hygiene, PPE, injection safety, and environmental cleaning and disinfection play an important role in keeping germs from spreading, and keeping patients safe. You can take infection control steps to reduce the risk of infections for chemotherapy patients.

Resources on IPC in Chemotherapy and recognizing risk:

1. <https://www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2022.html>
2. <https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/germs-body.html>
3. <https://www.cdc.gov/handhygiene/campaign/index.html>
4. https://www.cdc.gov/hai/pdfs/bicapp/CDC_PocketGuide_final_508Compliant.pdf
5. <https://www.cdc.gov/hai/prevent/infection-control-assessment-tools.html>
6. <https://www.cdc.gov/hai/settings/outpatient/basic-infection-control-prevention-plan-2011/>
7. <https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Healthcare-Germs-Body-Blood-508.pdf>
8. <https://www.cdc.gov/infectioncontrol/pdf/icar/ltcf.pdf>
9. <https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/Healthcare-Germs-Body-Skin-508.pdf>
10. <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>
11. <https://www.cdc.gov/hai/pdfs/guidelines/basic-infection-control-prevention-plan-2011.pdf>
12. <https://www.cdc.gov/infectioncontrol/pdf/icar/IPC-mod6-injection-safety-508.pdf>
13. Multi-Dose Vaccine Vial Injection Safety Tips
<https://www.youtube.com/watch?v=RDH5UH8M07c&list=PLvrp9iOILTQZQGtDnSDGViKDdRtlc13VX&index=2>
14. [clabsi toolkit tool 3-21 scrub the hubpdf.pdf \(jointcommission.org\)](#)
15. <https://www.cdc.gov/handhygiene/index.html>
16. [ONS Safe Handling Toolkit 0.pdfhttps://www.cdc.gov/niosh/docs/wp-solutions/2009-106/pdfs/2009-106.pdf](#)
17. [2009-106https://www.cdc.gov/niosh/docs/wp-solutions/2009-106/pdfs/2009-106.pdf.pdf](#)