

## I. PURPOSE

The immunocompromised patient has one or more defects in the body's normal defense mechanism that predisposes them to infection. Alteration in the immune system's ability to fight infection may be genetic, acquired, or secondary to disease or medical treatment. The greater the impairment of the immune system, the greater the potential for infection. Risk reduction combines strict attention to patient care practices and to maintenance of the inpatient environment.

## II. DEFINITIONS

### A. Immunocompromised patients

Patients who are receiving immunosuppressive drugs with absolute neutrophil count (ANC) >1000 cells. Patients with ANC 500 -1000 cells.

### B. Severely immunocompromised patients

Patients with ANC <500 cells.

### C. Neutropenic Precautions

Precautions designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in healthcare settings. Neutropenic Precautions apply to adult and pediatric patients with ANC < 500. For adult patients with hematologic malignancies and pediatric patients with malignancies and anemias with an ANC < 500 Neutropenic Precautions will be instituted. Neutropenic Precautions are in addition to Standard Precautions.

Neutropenic Precautions include:

1. Dietary restrictions
2. Visitor screening for symptoms of communicable disease
3. Plants and flowers restricted (not allowed)
4. Patient wears a surgical mask when outside of the room

### D. Bone Marrow Transplant (BMT) Precautions

Precautions designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in healthcare settings. BMT Precautions may apply to all allogeneic transplant patients and to autologous transplant patients depending upon bed availability. BMT Precautions are in addition to Standard Precautions.

BMT Precautions include:

1. Hepa filtration
2. Dietary restrictions [Dietary Guidelines for the Pediatric Bone Marrow Transplant Patient](#)
3. Visitor screening for symptoms of communicable disease
4. Confinement to room when ANC is <500 (pediatrics only) except for emergencies
5. Sterile drinking water (pediatrics only)
6. Plants and flowers restricted (not allowed)
7. Pediatric patient wears an N-95 respirator when outside the room. Adult patient wears a surgical mask when outside the room

## III. POLICY

### A. Hand hygiene

1. All healthcare workers are required to follow the Hand Hygiene Policy: [Hand Hygiene Policy](#)
2. In the pediatric oncology unit, nursing staff are required to perform a two minute scrub using antimicrobial soap at the beginning of the shift.

### B. [CENTRAL VENOUS CATHETER \(CVC\) CARE AND MAINTENANCE \(Adult\)](#) [CENTRAL VENOUS CATHETER \(CVC\) CARE AND MAINTENANCE \(Pediatric/Neonatal\)](#)

- C. Plants and flowers restriction  
Plants and flowers pose two theoretical infection hazards. Vase water and soil in plants contain large concentrations of potential pathogens, and decaying organic matter may contain fungus. Plants and flowers are restricted from intensive care unit patient rooms and immunocompromised patient rooms.
- D. Signage:
1. "NEUTROPENIC PRECAUTIONS" signs are affixed outside the room requiring Neutropenic Precautions.
  2. Upon admission "BONE MARROW TRANSPLANT PRECAUTIONS" signs are affixed outside the room requiring BMT Precautions.
- E. Patient Care Recommendations:
1. Single occupancy room with sink for hand hygiene and private bathroom
  2. Minimize invasive procedures (e.g., bladder catheterization, IV catheter insertions, or IV line entries)
  3. Restrict HCW with symptoms of communicable disease from providing care or visiting.
  4. Do not obtain oral or rectal temperatures in pediatric patients. Oral temperatures are acceptable in adult patients.
- F. Environmental Controls:
1. Facilities Management inspects and performs preventive maintenance of duct and filter systems routinely.
  2. Facilities Management repairs breaches in the system with appropriately-constructed exposure-reduction barriers, and notifies Infection Control: [Construction Policy](#)
  3. Protected Environments have separate maintenance schedules through Facilities Maintenance.
- G. Water Supply Systems/Prevention of Legionnaire's Disease: <http://fss.ucsfmedicalcenter.org/facilities/>
1. The potable water at the Medical Center is heated to a temperature of 140 degrees F; temperatures at the tap are between 120 and 132 degrees F, depending on the distance of the tap from the heat source. Warning signs are posted at each sink to prevent thermal injury to hot water users. UCSF Medical Center water supply is chloraminated and heated to prevent bacterial contamination.
  2. In the event of waterborne illness, HEIC may institute the following interventions:
    - a. Restrict severely immunocompromised patients from taking showers.
    - b. Use water that is uncontaminated with *Legionella spp.* for hematopoietic stem cell transplant patients' sponge baths.
    - c. Provide patients with sterile water for tooth brushing, drinking, and for flushing nasogastric tubing during a legionellosis outbreak.

Reviewed 8/91, 4/01, 4/04, 11/04, 2/08

*This guideline is intended for use by UCSF Medical Center staff and personnel and no representations or warranties are made for outside use. Not for outside production or publication without permission. Direct inquiries to the Office of Origin or Medical Center Administration at (415) 353-2733.*