

Special Populations

Autoimmune, Immunocompromised &
Recommended Precautions

Updated May 2024



This presentation is produced and presented by Carilion Clinic through the Virginia Long-Term Care Infrastructure Pilot Project (VLIPP)

Carilion VLIPP (2022-2024) is funded by the Virginia Department of Health to support long-term care facilities in Southwest Virginia with their infection prevention and control programs.

Disclaimer

- For educational purposes only
- No endorsement of products, software, or tools

Target Audience

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Administrator

Director of
Nursing

Assistant
Director of
Nursing

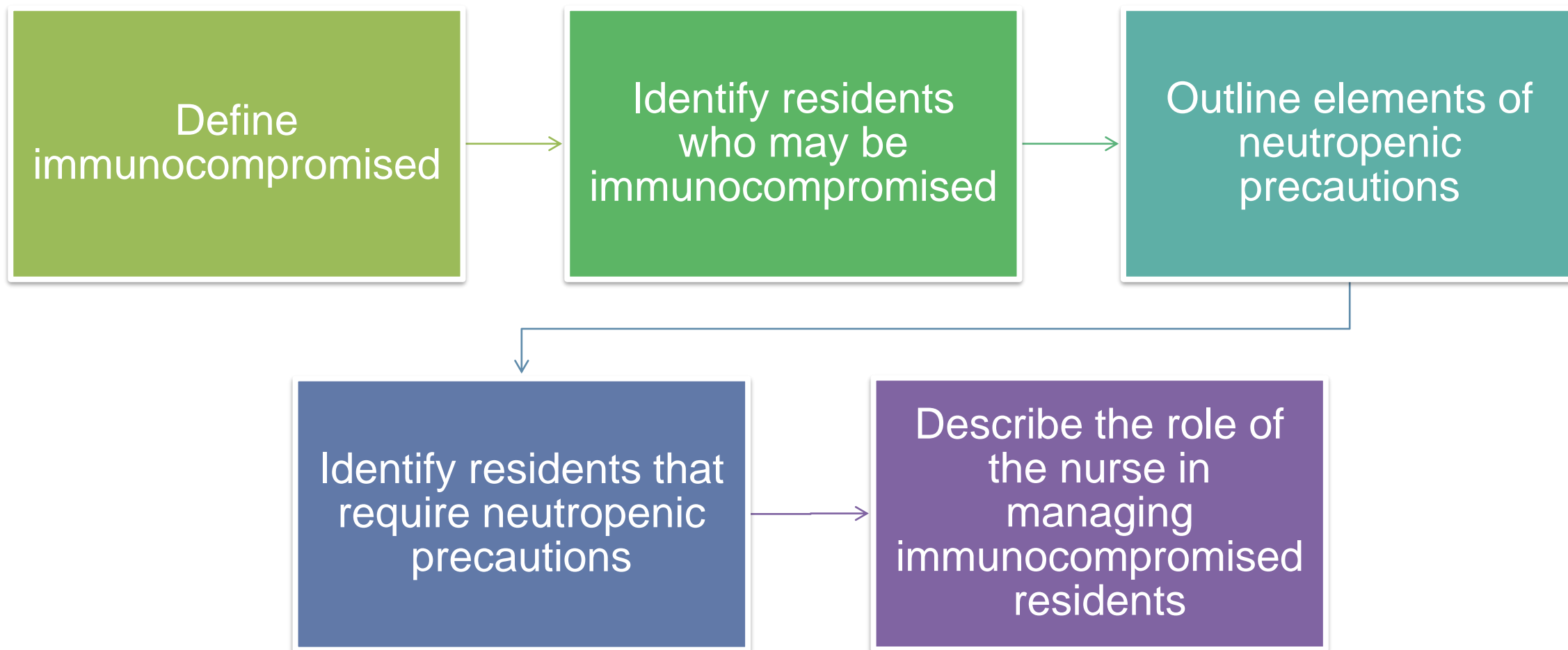
Infection
Preventionist

Clinical Staff

Kitchen/Food
Service Staff

Objectives

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Defining Immunocompromised

- What does it mean to be immunocompromised?
 - Weakened immune system – body cannot fight infections effectively
 - A person may develop infections with organisms a healthy immune system normally prevents
 - Can be due to
 - ☐ Chronic disease (HIV/AIDS, autoimmune disorders)
 - ☐ Treatments (Chemo & radiation therapy, chronic use of steroids)
 - ☐ Organ or bone marrow transplant
 - ☐ Age
 - ☐ Smoking

Immunocompromised in Long-Term Care

- Which residents are considered immunocompromised?
 - Cancer
 - Chemotherapy/Radiation
 - Autoimmune diseases (Lupus, Multiple Sclerosis)
 - Long term and short term steroid therapy
 - Chronic Respiratory Diseases
 - HIV
 - Antiretroviral therapy
 - Organ transplant

Immunocompromised in Long-Term Care Cont.

- People with cancer are at high risk of infections
 - Mortality due to infection is 3 times higher when compared to general population
- People with lupus and other autoimmune conditions are at increased risk of infection due to disease itself and treatments that can weaken the immune system
 - People with mild cases of rheumatoid arthritis are 3 times more likely to get an infection
- Estimated 1.2 million people in the US are living with HIV
 - In 2021 – 19,986 deaths in HIV positive persons
- Risk of death among immunocompromised hospitalized with COVID-19 was 1.44 times greater

Infection Prevention Practices

Good infection prevention practices reduce illness & poor outcomes

- Training
 - Staff – should be provided education on population, policies and specific practical skills
 - Resident & Family – should be actively engaged in care and infection prevention
- Hand sanitizer dispensers located at main areas and throughout facilities increase hand hygiene adherence
 - Adherence to hand hygiene at Robert Koch Institute saw a reduction in HAIs from 6 to 2.5 infections per 1,000 patient days
- Vaccination is the most effective way to prevent illness and death
- Environmental Cleaning & Disinfection

How to Keep Immunocompromised Residents Safe

- Maintain high infection control standards
 - Precautions
 - Standard Precautions
 - Enhanced Barrier
 - Neutropenic/Reverse Precautions
 - Transmission Based Precautions
 - Food Handling
 - Vaccination
- Nutrition & Hydration

Neutropenic Precautions

- May also be referred to as:
 - Protective or Reverse Precautions
- Recommended for
 - Severely Immunocompromised & Immunosuppressed
 - Residents receiving any cancer treatment
 - Transplants
 - Residents with WBC below 500 cells/mm³ (μL)
 - CD4 count less than 200 cells/mm³ (μL)

STOP

NEUTROPENIC PRECAUTIONS



ALTO

Not included in CDC's Guidelines for Isolation Precautions

PRECAUCIONES NEUTROPÉNICAS



Family/Visitors should not visit if having signs or symptoms of an infection or a communicable disease. Visitation also based on facility's policy.
Los familiares y visitantes no deben visitar si tienen señales o síntomas de infección o de una enfermedad contagiosa. Las visitas también dependen de la política de la instalación.

Follow instructions below before entering room.
Antes de entrar a la habitación, siga las instrucciones a continuación.





Everyone must:
Todos deben:



Clean hands before entering and when leaving room.
Lavarse las manos antes de entrar y antes de salir de la habitación.



Avoid raw or under cooked fruits or vegetables; raw or undercooked eggs or shellfish
Evitar las frutas y verduras crudas o poco cocidas; los huevos o mariscos crudos o poco cocidos.



No live flowers or plants.
No se permiten flores ni plantas vivas.



Do not enter if feeling unwell.
No entre si está enfermo.

Additional PPE may be required per Standard Precautions.
Es posible que se exija utilizar equipo de protección personal adicional según las precauciones estándar.

Translated by UNC Health Interpreter Services

REVISED DATE: 1/20/2022


Image Source: UNC, SPICE <https://spice.unc.edu/resources/signage/>


Neutropenic Precautions


ATTENTION/ATENCIÓN

PROTECTIVE PRECAUTIONS

Visitors must report to Nursing Station before entering.

☒ Perform hand hygiene upon entering and leaving room

☒ No persons with infections may enter

☒ No dried or live plants or flowers

You **may be** required to wear a surgical mask.
The resident MUST wear a mask if they leave the room to further lessen their exposure to infection.

PRECAUCIONES DE PROTECCIÓN

Los visitantes deben presentarse primero al puesto de enfermería al entrar. Lávese las manos.
No entren personas con infección. No entren con plantas vivas ni flores.

How to Protect Residents

- Hand Hygiene
- Minimum PPE recommended:
 - Mask
 - Gloves
 - Gown
- Visitor Restrictions
 - Screen visitors for signs/symptoms of infection
- No Live or Dried Plants
- Environmental Cleaning
- Standard Precaution Measures
 - Injection Safety
 - Aseptic Technique for Procedures
 - Respiratory Hygiene
- Recommend resident wear a mask when transported out of room

Protecting Residents

- Frequent hand hygiene
- Shower or bathe daily
- Use unscented lotion to prevent drying and cracking of skin
- Avoid crowded places
- Avoid people who are sick
- Do not share food, drinks, or personal items
- Get recommended vaccines

Q&A

A resident on neutropenic precautions needs to be placed on transmission-based precautions if criteria is met. (ex. COVID-19 outbreak)

True or False?

Food Handling



- No raw or undercooked meats
- Vegetables and fruits must be thoroughly washed
- Milk, juices, and cheese must be pasteurized

Nutrition & Hydration

- Immunocompromised residents may have a reduced appetite
- Poor nutrition may weaken the immune system
- Bacteria and/or viruses on raw vegetables, fruits, or in non-pasteurized foods may cause infections
- Immunocompromised residents can drink treated water, not well water
- Sterile water recommended during outbreaks of waterborne disease



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Role of the Nurse

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Strict adherence of precautions during care activities



Assess residents & recommend appropriate precaution(s)



Assess for signs and symptoms of infection



Administer medications as appropriate



Conduct surveillance & monitoring among immunocompromised population



Report reportable diseases to the appropriate entity

Case Study #1

A new admission has HIV, is on antiretroviral therapy (ART) and has a CD4 count of 500 cells/mm³ (μL).

- Do they need precautions?
- If so, what precaution?

Case Study #2

Your resident is undergoing radiation therapy for prostate cancer. Their recent white blood cell (WBC) count is 450 cells/mm³ (μL).

- Do they need precautions?
- If so, what precaution?

Summary

- First step to preventing infections is proper hand hygiene
- Disease, treatments, medications can impact the immune system by reducing white blood cells or changing the way the immune system functions
- Neutropenic/Reverse/Protective Precautions should be considered for residents receiving any kind of cancer treatment, antiretroviral therapy, or autoimmune condition
- Neutropenic/Reverse/Protective precautions should be used on residents with white blood cell counts below 500 cells/mm³ or CD4 below 200 cells/mm³
- It is recommended to wear a minimum of gown, face mask, and gloves when interacting with residents on neutropenic/reverse/protective precautions

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