Standard and Transmission-Based Precautions

Basics of Infection Prevention
2-Day Mini-Course
2014

Objectives

- Review modes of disease transmission
- Discuss prevention of infection and prevention of transmission
- Review standard, enhanced and transmission-based isolation precautions

Prevent Infection. Prevent Transmission.

Prevent Infection: Avoid introduction of pathogens into sterile body sites, such as during placement of a medical device or during surgery

- Avoid introducing patient's own flora into a sterile site
- Avoid introducing any pathogens acquired in the hospital

Prevent Transmission: Avoid the transfer of pathogens from person-to-person

- Avoid HCP-to-patient transmission, such as via contaminated hands of HCP
- Avoid patient-to-HCP transmission of infectious diseases, such as by using appropriate isolation precautions

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Standard Precautions

Basic principles

- Designed to reduce risk of transmission from both recognized and unrecognized sources of infection
- Considers all body fluids infectious (except sweat)
- Used for care of all patients

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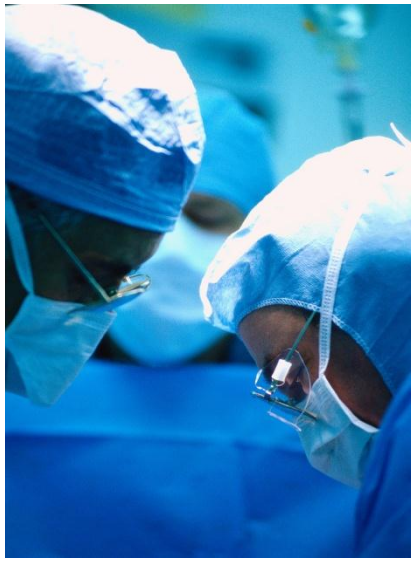
Standard Precautions



Include

- Hand hygiene
- Barrier protective equipment
  - Gloves for anticipated contact with blood, body fluids (except sweat)
  - Mask and eye protection if splash, splatter, or sprays reasonably anticipated
  - Gloves and gown for open, draining wounds, fecal incontinence
  - Mask for new onset or increasing respiratory secretions

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Standard Precautions - continued

- Proper…
  - use and handling of patient care equipment
  - environmental cleaning and disinfection
  - handling of linen
  - patient placement to minimize disease transmission
- Respiratory Hygiene/Cough Etiquette
- Safe injection practices

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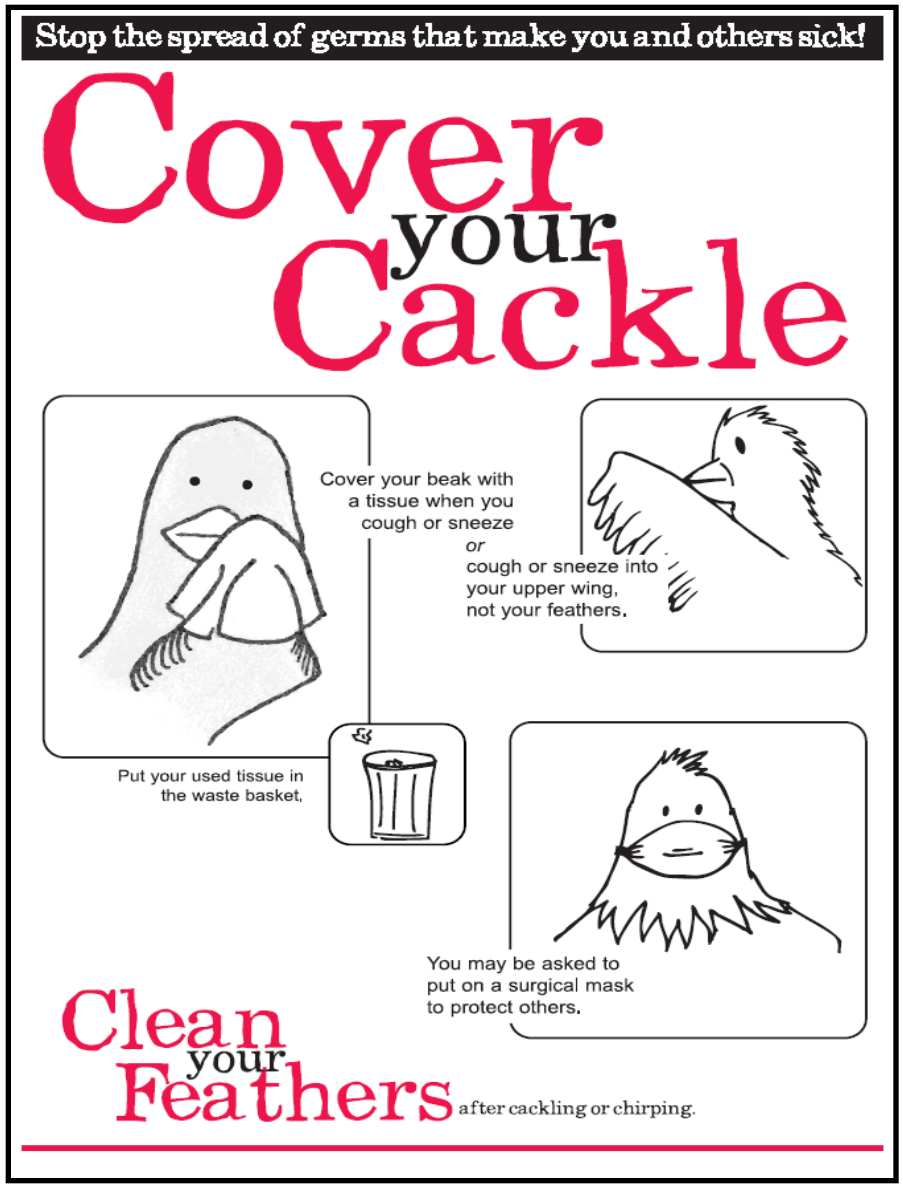
Respiratory hygiene and cough etiquette includes

- Containment of respiratory secretions
- Proper disposal of used tissues



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LTCF Enhanced Standard Precautions

- Developed in 2010 by CDPH and the California Association of Health Facilities (CAHF)
- To create a single-tiered approach to prevent transmission of all infectious agents in California
- Facilitate transfer of patients on contact precautions between acute care hospitals and LTCFs

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LTCF Enhanced Standard Precautions

- Enhanced standard precautions guidance specific to Long-term care facilities in California: AFL 10-27

State of California—Health and Human Services Agency

California Department of Public Health

MARK B HORTON, MD, MSPH
Director

ARNOLD SCHWARZENEGGER
Governor

September 7, 2010 AFL 10-27

TO: Long-Term Care Facilities and General Acute Care Hospitals

SUBJECT: Enhanced Standard Precautions (ESP) for Long-Term Care Facilities

The purpose of this All Facility Letter is to distribute the accompanying "Enhanced Standard Precautions for California Long-Term Care Facilities, 2010." This guideline is

Expanded Isolation Precautions

- Used in addition to Standard Precautions when SP may be insufficient to prevent transmission
- Include
  - **Contact precautions**
  - **Droplet precautions**
  - **Airborne precautions**

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Contact Precautions

- Intended to prevent transmission of infectious agents via direct or indirect contact
- Used for "epidemiologically important" microorganisms
- Places a barrier between the HCW and infectious agent
- Gown and gloves should be donned prior to entry into room, discarded prior to exit
- Single room preferred; alternatives are spatial separation or cohorting (after consultation with IP)

used in addition to Standard Precautions

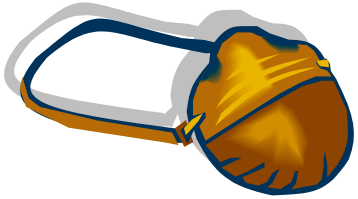
Droplet Precautions

- Intended to prevent transmission of pathogens via respiratory or mucous membrane contact with respiratory secretions
- No special air handling or ventilation required
- Surgical or procedure mask should be donned prior to entry into room, discarded prior to exit
- Single room preferred; alternatives are spatial separation or cohorting (after consultation with IP)
- Patient should be transported in a mask

used in addition to Standard Precautions

Airborne Precautions

- Intended to prevent transmission by inhalation of infectious agents that can remain suspended in the air
- Requirements include
  - Increased ventilation rate
  - Air exhausted directly to the outside or through HEPA filtration
  - Facility respiratory protection program (education, fit-testing, user seal checks in place)
- Respirator should be donned prior to entry into room, discarded after exit
- Single room preferred; alternative is cohorting
- Patient should be transported in a mask



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used in addition to Standard Precautions

Relationship of pressure on droplet size and dispersion

Low pressure produces large droplets

Increasing pressure produces more of a range of droplet sizes that travel further from the source

Higher pressure produces sprays of varying sizes including very small particles that can travel even further from the initial source

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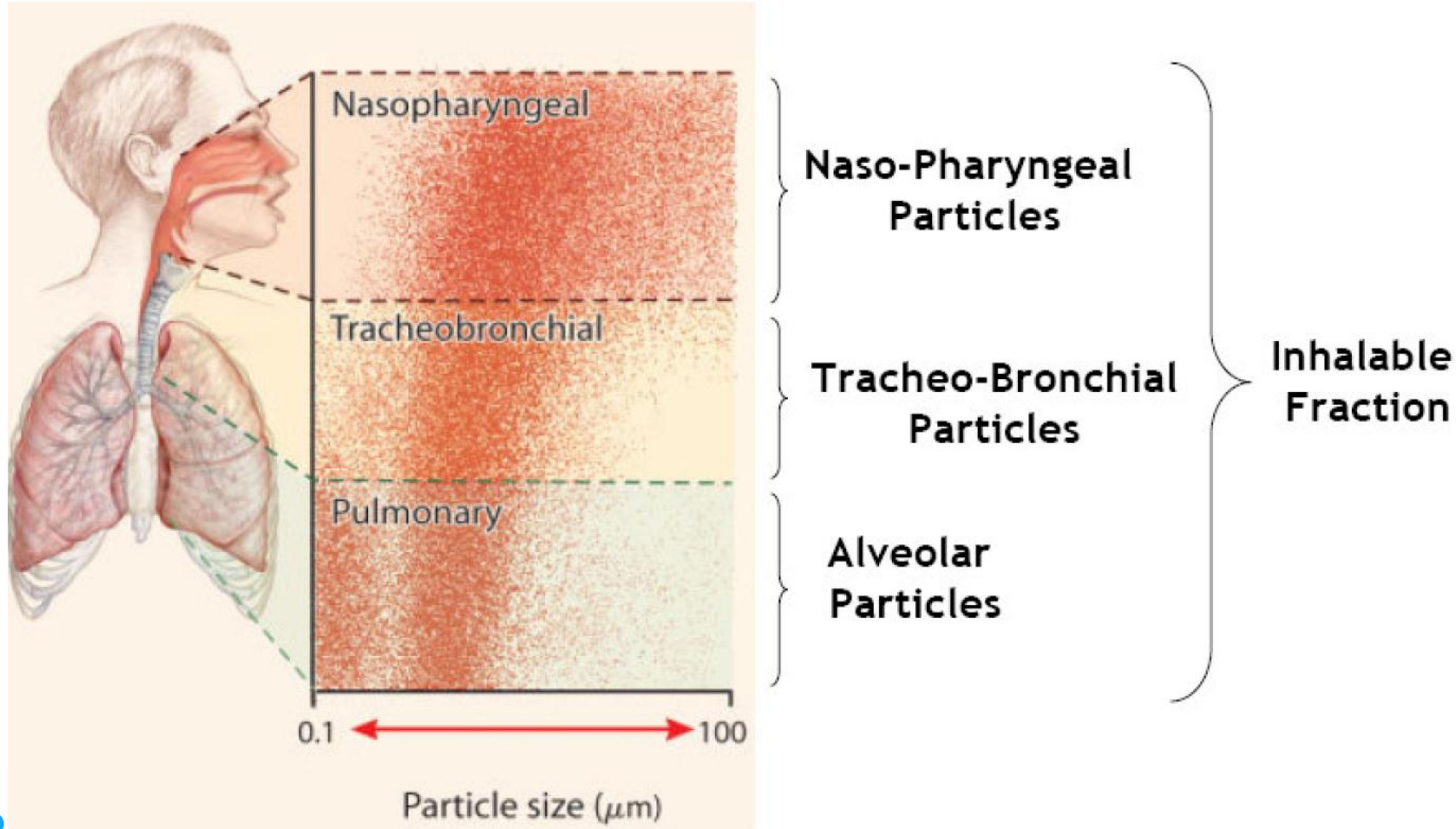
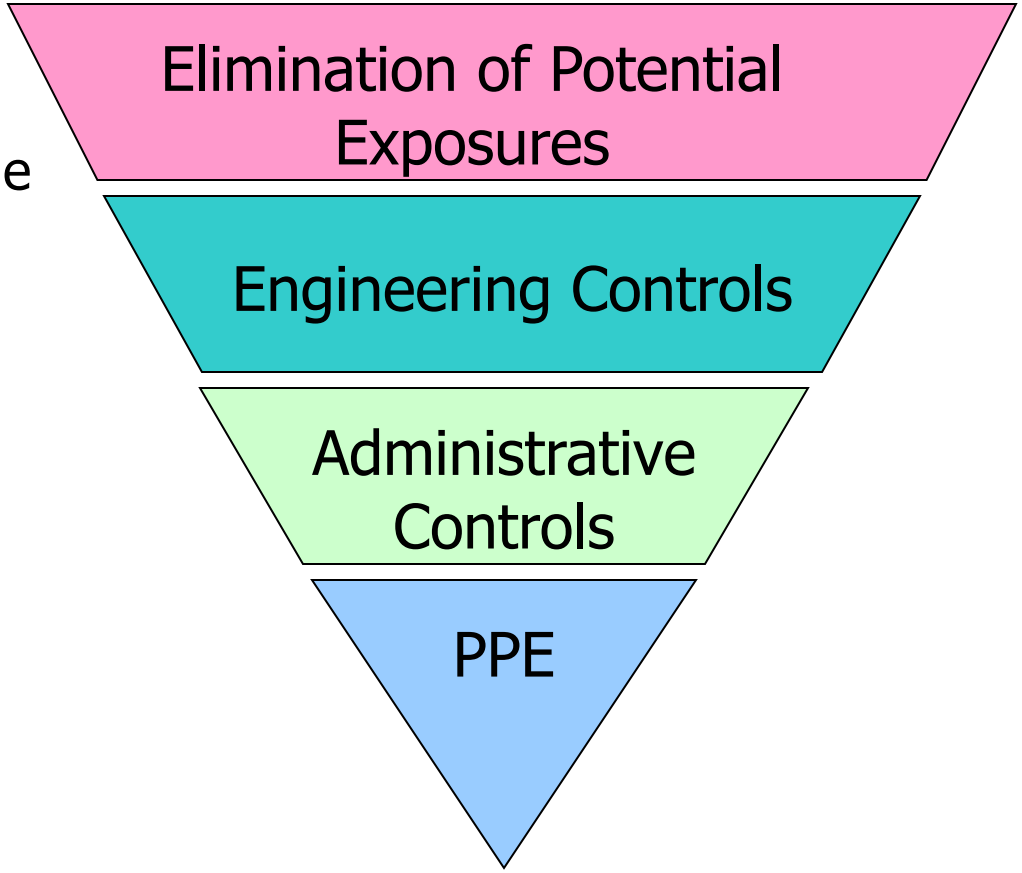
Particulates deposited in respiratory tract according to size



Hierarchy of Controls (with examples)

- Eliminate exposure being able to result in disease
  - Immunize HCWs against vaccine-preventable diseases
- Reduce/eliminate exposure at the source
  - Airborne isolation rooms
  - Mask patient with respiratory symptoms
- Rules are only as good as enforcement
  - Wear mask if not vaccinated against influenza
  - Staff do not work when ill
- Least effective; depend upon individual compliance
  - Respirators



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2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

Jane D. Siegel, MD; Emily Rhinehart, RN MPH CIC; Marguerite Jackson, PhD; Linda Chiarello, RN MS; the Healthcare Infection Control Practices Advisory Committee

Acknowledgement: The authors and HICPAC gratefully acknowledge Dr. Larry Strausbaugh for his many contributions and valued guidance in the preparation of this guideline.

Suggested citation: Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings
http://www.cdc.gov/ncidod/dhqp/pdf/isolation2007.pdf

Note: HICPAC guidelines are CDC guidelines

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Questions?

For more information, please contact any HAI Liaison Team member

Thank you