

# **Infection Control in Healthcare Facilities**

- **Basic Principles**
  - Hand Hygiene / Respiratory Etiquette
  - Exclusion of ill staff and visitors
  - Standard and droplet precautions
- **Facility-specific measures**
  - Hospitals
  - Long Term Care (Nursing Homes, Adult Homes, Home Health Care)
  - Ambulatory settings

# Hand Hygiene

- Reduction or removal of infectious agents to prevent spread



# Hand Hygiene

- **Reduction or removal of infectious agents to prevent spread**
- **Soap and Warm water**
  - **At least 20 seconds**
  - **Ideal, especially for visibly dirty hands**
- **Alcohol-based Hand Sanitizer**
  - **Acceptable alternative for most viruses**
  - **Not appropriate for visibly soiled hands**

# Respiratory Etiquette

- Sneeze or cough into tissue or elbow
- Discard tissue immediately
- Perform hand hygiene



# **Exclusion of Ill Staff**

- **Buck the culture**
  - Not productive or useful to patients when staff work while ill
- **NYS Regulations**
  - 10NYCRR405.3(b)(10) & (14)
  - Patient safety is a facility's responsibility
  - Hospitals must assess employee health status and take appropriate measures to protect patients

# **Exclusion of Ill Staff**

- **Duration of exclusion**
  - **Clinical improvement and afebrile (off antipyretics) for at least 24 hours**
  - **Cough may persist for days to weeks**
- **Employer considerations**
  - **Sick leave policy and compensation**
  - **Staff backup system**
  - **Do not require doctor's note**

# Standard Precautions

- **Basic infection prevention and control strategies to care for all patients**
- **Infectious agents may be found in:**
  - **Blood**
  - **Body fluids**
  - **Secretions**
  - **Excretions except sweat**
  - **Nonintact skin**
  - **Mucous membranes**

# Standard Precautions

- **For ALL patients, ALWAYS**
  - For bloodborne pathogens, assume all patients infected
  - Hand hygiene prior to contact
  - Don appropriate personal protective equipment (PPE) for the task
  - Remove PPE and perform hand hygiene when done

# Personal Protective Equipment

- **Dependent on task and likelihood of exposure to infectious material**
  - **Gloves**
  - **Mask or Respirator**
  - **Face shield or eye protection**
  - **Gown**



# Droplet Precautions

- **Agents that generate large respiratory droplets**
  - Do not remain suspended in the air for prolonged period
  - Do not travel far and maintain infectivity
- **Gloves plus mask when within 6 feet**
  - Influenza
  - Parainfluenza (e.g. viral croup)
  - Pertusis

# **Airborne Precautions**

- **Agents that are transmitted by small particles**
  - **Remain suspended and travel through air**
  - **Persist and remain infectious**
  - **Infect lower airway**
- **N95 or better respirator plus AIIR**
  - **Airborne Infection Isolation Room**
  - **TB**
  - **Measles**
  - **SARS (?)**

# Influenza Precautions

- **Routine care – Standard plus Droplet**
  - Large respiratory droplets
  - Infect upon contact with mucous membranes
- **High risk procedures – Additional precautions**
  - Small airborne particles generated during aerosol-generating procedures
  - Intubation, extubation, open tracheal suction, bronchoscopy, nebulized treatments, CPAP, BiPAP

# Aerosol Generating Procedures

- Definition variation

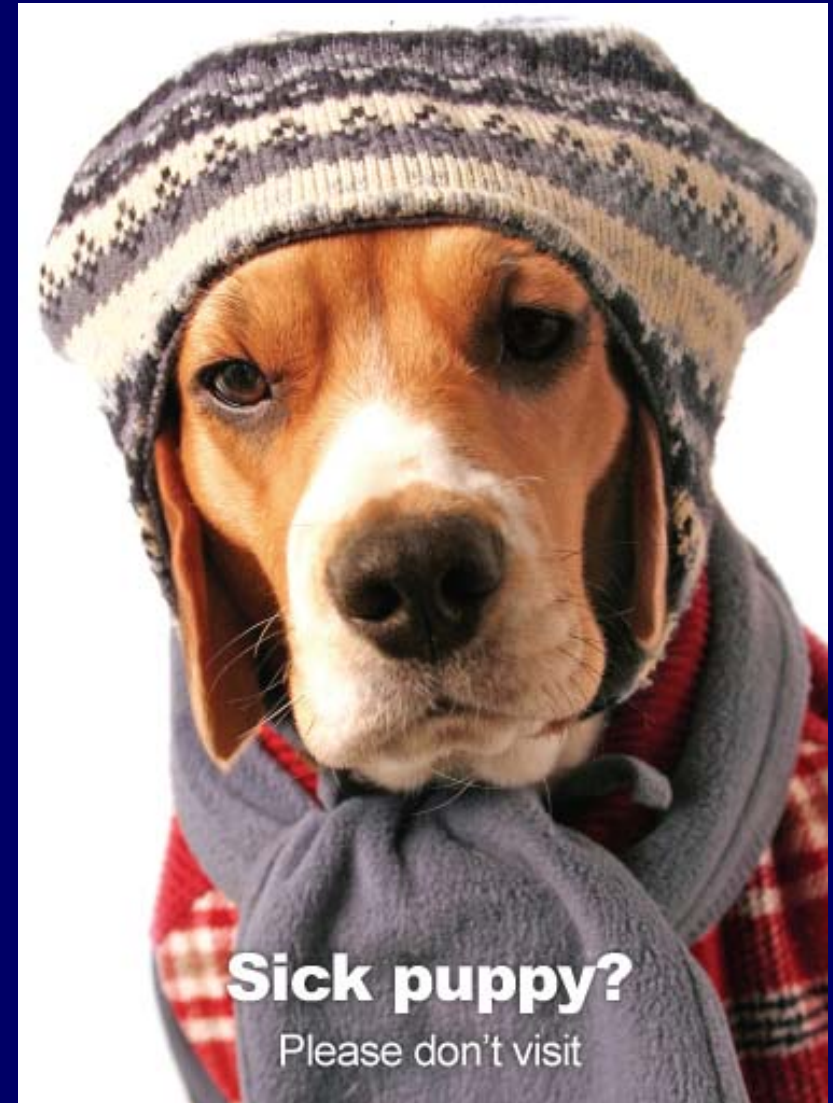
Procedure	CDC	NYS DOH	NYC DOHMH	SHEA	APIC	OSHA
Intubation	Yes	Yes	Yes	Yes	Yes	Yes
Suctioning	Yes	Yes	Yes	Yes	Yes	Yes
Bronchoscopy	Yes	Yes	Yes	Yes	Yes	Yes
Nebulized treatment	Yes	Yes	Yes	No		Yes
CPAP/BiPAP	Yes	Yes				Yes

SHEA – Society for Hospital Epidemiologists of America

APIC – Association of Professionals in Infection Control & Epidemiology

# Preventing Transmission

- Prevent exposure
  - Don't come to work if ill
  - Early appropriate action to isolate or exclude ill patients and staff
  - No ill visitors
  - Hypervigilance after known exposure



# Cleaning

- **Routine measures adequate**
  - Enforce existing policies
  - Concentrating on high touch surfaces
  - Consider increasing frequency
- **Cleaning and disinfection**
  - Clean visible soiling before disinfection
  - Use hospital-grade disinfectants according to manufacturers instructions
  - Dilute bleach acceptable

# Hospital Transfer

- **Reserve ED for true emergencies only**
  - Evaluate on site whenever possible
- **Based on patient assessment**
  - Severity of illness
  - Not level of anxiety, community illness level, need for routine medical assessment
- **Advance notice**
  - Notify EMS, ED, others of plans

# Hospital Considerations

- **Emergency Department**
  - **Waiting areas and ambulatory nature**
  - **Triage at point of entrance for febrile respiratory illness**
  - **Masking and/or distancing in waiting rooms**

# Hospital Considerations

- **All Units**
  - **Strict Droplet Precautions with any ILI until diagnosis is made**
  - **Restrict ill visitors from unit**
  - **Use supervisors to enforce ill staff exclusion**
  - **Coordinate management with Employee Health Department**

# **Nursing Home Considerations**

- **Chronic illness**
  - **Change in baseline rather than overt illness**
  - **Increased secretions, temperature instability**
  - **Low threshold to suspect influenza or other communicable disease**

# **Nursing Home Considerations**

- **Residence**
  - **Limit interactive gatherings and activities**
  - **Contingency plans to avoid social isolation**
- **Aggressive response to facility illness**
  - **Limit staff floating**
  - **Low threshold for precautions**
  - **Develop and enforce IC policies**

# Home Health Considerations

- **Source control**
  - Cover cough
  - Proper PPE
- **Early detection by caregivers**
  - Monitor patients for symptoms
- **Early agency notification**
  - Agency to monitor employees
  - Agency to report to LHD and medical provider

# **Adult Home Considerations**

- **Congregate setting**
  - **Community mitigation strategies**
- **Source control**
  - **Cover cough**
  - **Hand hygiene is critical**
- **Early detection**
  - **Monitor residents for symptoms**
- **Early notification**
  - **Report to LHD and medical provider**

# **Ambulatory Considerations**

- **Prior to visit to prevent exposures**
  - Phone triage
  - Scheduling respiratory illness later in day
  - Hand sanitizer, masks, and tissues at entrances
- **Separation**
  - In room as quickly as possible
  - Masks or physical distancing
- **Signage and education**
  - For both staff and patients