

INFECTION CONTROL IN PEDIATRIC SKILLED NURSING FACILITIES

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WHAT ARE THE PREDISPOSING MEDICAL CAUSES FOR INFECTIONS IN YOUR FACILITY?

HOW DO YOU DEFINE:

Pneumonia	_____
Bronchitis	_____
Urinary tract infection	_____
Cellulitis	_____
Gastroenteritis	_____
Conjunctivitis	_____
Common cold / Pharyngitis	_____
Influenza-like illness	_____
Septicemia	_____

HOW DO YOU DEFINE: EPIDEMIC AT YOUR FACILITY?

INFECTION CONTROL: LOG BOOK

Types of Infections

Positive Cultures

Section for Each Resident

Nurse Reviews Before Calling Attending Physician

**INFECTION CONTROL:
MONITORING RATES OF INFECTION**

FACILITY A:	101 Residents	FACILITY B:	49 Residents
	4.5 Years of Data		6 Years of Data

MEAN # OF CASES / MONTH / 100 RESIDENTS

	FACILITY A	FACILITY B
UPPER RESP	2.07	2.24
LOWER RESP	4.43	4.93
EYE	5.75	2.52
EAR	2.47	4.39

**MEAN # OF CASES / MONTH / 100 RESIDENTS
± 1 Standard Deviation**

	FACILITY A	FACILITY B
UPPER RESP	2.07 ± <u>2.50</u>	2.24 ± <u>3.22</u>
LOWER RESP	4.43 ± <u>3.33</u>	4.93 ± <u>5.78</u>
EYE	5.75 ± <u>3.47</u>	2.52 ± <u>3.13</u>
EAR	2.47 ± <u>1.77</u>	4.39 ± <u>4.48</u>

**MAXIMUM ALLOWABLE # OF CASES / MONTH / 100 RESIDENTS
(Mean + 2 Standard Deviations of the Mean)**

	FACILITY A	FACILITY B
UPPER RESP	7.1	8.7
LOWER RESP	11.1	16.5
EYE	12.7	8.8
EAR	6.0	13.3

STANDARD PRECAUTIONS

Visitors - Report to Nurses' Station Before Entering Room

BEFORE CARE

1. Wash hands.



DURING CARE

1. Wear gloves when touching body substances, mucous membranes, nonintact skin, and contaminated items. Change frequently after contact with infected material.



2. Mask / faceshield is indicated if splashing of body substances is likely.



AFTER CARE

1. Place needles in Sharps container. Do not recap.



2. Wash hands.



REVISED CDC ISOLATION PRECAUTIONS

CONTACT PRECAUTIONS

In addition to Standard Precautions

Visitors - Report to Nurses' Station Before Entering Room

BEFORE CARE

1. Private room.



2. Wash hands.



3. Wear gown if soiling likely.



4. Wear gloves when entering room. Change after contact with infective material.



DURING CARE

1. Limit transport of patient / resident to essential purposes only. Patient / resident must wear mask appropriate for disease.



2. Limit use of noncritical care equipment to a single patient / resident.



AFTER CARE

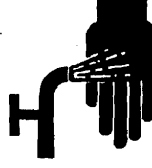
1. Bag linen to prevent contamination of self, environment or outside of bag.



2. Discard infectious trash to prevent contamination of self, environment or outside of bag.



3. Wash hands.



Infections or Conditions Requiring Contact Precautions

Abscess, draining, major
Adenovirus infection, infants and young children
Bronchiolitis, infants and young children
Cellulitis, uncontrolled drainage
Chickenpox (varicella)
Clostridium spp., *C. difficile*
Congenital rubella
Conjunctivitis, acute viral (acute hemorrhagic)
Coxsackie virus, infants and young children
Croup, infants and young children
Decubitus ulcer, infected, major
Diphtheria, cutaneous
Ebola viral hemorrhagic fever
Echovirus, infants and young children
Encephalitis, infants and young children
Enterocolitis, *C. difficile*
Enteroviral infections, infants and young children
Furunculosis-staphylococcal, infants and young children
Gastroenteritis
C. difficile
E. coli, enterohemorrhagic O 157:H7, diapered or incontinent
Rotavirus, diapered or incontinent
Shigella species, diapered or incontinent
Hand, foot and mouth disease, infants and young children
Hemorrhagic fevers (e.g., Lassa, Ebola)
Hepatitis, viral, Type A, diapered or incontinent
Hepangina, infants and young children
Herpes simplex (*Herpesvirus hominis*)
Mucocutaneous, disseminated or primary, severe
Neonatal

Herpes zoster (varicella-zoster), localized in immunocompromised patient, or disseminated
Impetigo
Lassa fever
Lice (pediculosis)
Marburg virus disease
Multidrug-resistant organisms, infection or colonization
Gastrointestinal
Respiratory
Skin, wound or burn
Parainfluenza virus infection, respiratory, infants and young children
Pediculosis (lice)
Pleurodynia, infants and young children
Pneumonia
Adenovirus
Viral, infants and young children
Respiratory infectious disease, acute (if not covered elsewhere), infants and young children
Respiratory syncytial virus infection, infants, young children and immunocompromised adults
Rotavirus infection, diapered or incontinent
Rubella (German measles), congenital
Scabies
Shigellosis, diapered or incontinent
Staphylococcal disease (*S. aureus*), skin, wound or burn, major
Streptococcal disease (group A *Streptococcus*), skin wound or burn, major
Varicella (chickenpox)
Viral diseases, respiratory (if not covered elsewhere), infants and young children
Wound infections, major
Zoster (varicella-zoster), localized in immunocompromised patient, disseminated

DROPLET PRECAUTIONS

In addition to Standard Precautions

Visitors - Report to Nurses' Station Before Entering Room

BEFORE CARE

1. Private room.
Maintain 3 feet of spacing
between patient / resident
and visitors.



2. Mask / faceshield for
staff and visitors within
3 feet of patient / resident.



DURING CARE

1. Limit transport
of patient / resident
to essential purposes
only. Patient / resident
must wear mask
appropriate for
disease.



2. Limit use of
noncritical care
equipment to a single
patient / resident.



AFTER CARE

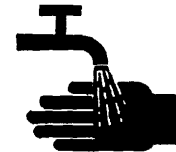
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3. Wash hands.



Infections or Conditions Requiring Droplet Precautions

Adenovirus infection, infants and young children

Diphtheria, pharyngeal

Epiglottitis, caused by *H. influenzae*

German measles (rubella)

Influenza

Meningitis

H. influenzae, known or suspected

Neisseria meningitidis (meningococcal), known or suspected

Meningococcal pneumonia

Meningococemia (meningococcal sepsis)

Mumps (infectious parotitis)

Mycoplasma pneumoniae

Parvovirus B19

Pertussis (whooping cough)

Plague, pneumonic

Pneumonia

Adenovirus

H. influenzae, infants and children (any age)

Meningococcal

Mycoplasma (primary atypical pneumonia)

Streptococcus, Group A, infants and children (any age)

Rubella (German measles)

Streptococcal disease (Group A *Streptococcus*)

Pharyngitis, infants and young children

Pneumonia, infants and young children

Scarlet fever, infants and young children

Whooping cough (pertussis)

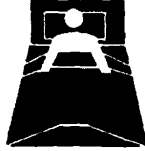
AIRBORNE PRECAUTIONS

In addition to Standard Precautions

Visitors - Report to Nurses' Station Before Entering Room

BEFORE CARE

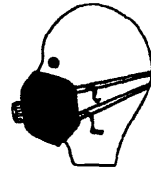
1. Private room and closed door with monitored negative air pressure, frequent air exchanges and high-efficiency filtration.



2. Wash hands.



3. Wear respiratory protection appropriate for disease.

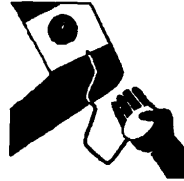


DURING CARE

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2. Limit use of noncritical care equipment to a single patient / resident.



AFTER CARE

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2. Discard infectious trash to prevent contamination of self, environment or outside of bag.



3. Wash hands.



Infections or Conditions Requiring Airborne Precautions

Chickenpox (varicella)

Herpes zoster (varicella-zoster), localized in immunocompromised patient, or disseminated

Measles (rubeola), all presentations

Tuberculosis, pulmonary, confirmed or suspected or laryngeal disease

Varicella (chickenpox)

Zoster (varicella-zoster), localized in immunocompromised patient, or disseminated

MRSA AND VRE

Recent Reports:

Community acquired MRSA producing serious illnesses in children
High frequency in outpatient Dermatology practices

20+% MRSA Colonization in N. H. (nasal)

30% Hospital Staph Aureus cultures are MRSA

Theory that origin of MRSA was IV drug abusers

Developed heart infection with Staph; require long-term IV antibiotic Rx

MRSA Infections: most are wound--Decubitus

Most MRSA colonized are also VRE colonized

Theory that origin of VRE was agricultural

Recent Studies: 20% VRE Colonization, primarily UTI

Unpublished study:

Monthly urine cultures for 1 year

100/400 became + for VRE

Only 20 were + for more than 4 mon.

All other cases cleared spont. with no Rx

MRSA and VRE are weak pathogens

Recent Report: MRSA is becoming Vancomycin resistant

PREVENTION

HANDWASHING HANDWASHING HANDWASHING

Isolation

Monitoring treatment and medication administration techniques

Dietary Department

Environmental Services

Immunization programs

Equipment changes

TUBERCULOSIS

- Risk assessment
- Identify / evaluate / treat
- Engineering controls
- Protective equipment

25% of all cases of TB are in those ≥ 65 y.o.

General population, PPD converter, without INH, 10% lifetime risk of TB

PPD converter, in N.H., without INH, 20% develop TB

Multi-Drug Resistant TB; Immunocompromised individuals

PPD screening procedures (for residents and employees):

Initially two-step intradermal intermediate strength

Minimal risk facility: yearly

Intermediate risk facility: every 6 months

High risk facility: every 3 months

Clinical criteria for active TB (if already PPD positive)

Cough > 3 weeks (\pm productive)

Hemoptysis

Night sweats

Weight loss

Fevers

EMPLOYEE RELATED ISSUES

Inservicing

Presence of communicable diseases, acute illness

Immunization requirements

Exposure to blood borne pathogens

Exposure incident reports

RECORD

CLINICAL JUDGMENT MUST ALWAYS

SUPERCEDE PROTOCOL DETAILS

PROTOCOL: INFECTION CONTROL

(PROTOCOLS BY DR. AUDRIUS V. PLIOPLYS)

If a resident's temperature is 101 (R) or above or if any symptoms are present (example: nasal discharge, productive cough, etc.), keep resident in bed or in wheelchair in room until temperature gone and no symptoms present for 24 hours.

When there is reason to believe that a resident has an infectious or communicable disease, the Attending Physician will be notified for appropriate precautions. Precautions shall remain in effect until discontinued by the Attending Physician.

If diagnosed as urinary tract infection or otitis media, only standard precautions are necessary.

Use gloves and standard precautions for any contact with:

- blood
- body fluids visibly contaminated with blood
- purulent nasal discharge or tracheal secretions
- wound drainage or secretions
- diarrhea
- discharge from eyes or ears
- secretions from any area

Strict hand washing ENFORCED when resident has elevated temperature or any symptom.

Medical Director's Signature: _____

PROTOCOL: FEVER

When a resident spikes a fever, temperature \geq 101 (R) or 99.5 (A):

Obtain full set of vital signs and oxygen saturation

Note presence or absence of:

- vomiting
- abdominal distension
- diarrhea
- cough
- purulent (yellow/green) nasal drainage
- purulent (yellow/green) pulmonary discharge
- conjunctivitis
- arousability
- irritability
- increased seizures

Check for:

- rash or sores
- eardrums for redness or discharge (use otoscope)
- throat redness, white patches
- nuchal rigidity (stiff neck)
- chest (auscultate)
- abdomen (for bowel sounds, tenderness, distension and impaction—if impacted, remove stool; see Protocol: Emesis)
- swollen anterior cervical nodes

If any abnormalities noted, notify Attending Physician for further orders.

Give acetaminophen or ibuprofen according to order sheet for that resident, PRN.

If resident is vomiting, may substitute acetaminophen suppositories mg/mg and administer rectally.

Give additional fluids (10cc/kg per day) of Pedialyte or clear liquids for fever > 101.5 (R) (see Protocol: Fluid Calculations for routine fluid requirements).

Monitor temperature every 1 hour until ≤ 101.5 (R) and then every 4 hours until normal for 24 hours.

For a temperature ≥ 104 (R), may use a tepid bath for 30 minutes.

Notify Attending Physician if:

resident's temperature is above 101.5° (R) for 24 hours, if there are no other symptoms.

there is no response to antibiotic treatment after 72 hours.

Medical Director's Signature: _____

PROTOCOL: FLUID CALCULATION

The following is a fluid requirement formula that is followed if a resident has an emesis and/or diarrhea:

Note: weight in pounds divided by 2.2 = weight in kilograms

Fluid requirements/24 hours:

0 - 10kg	=	100cc/kg/24hrs
+ 10 - 20kg	=	50cc/kg/24hrs
+ over 20kg	=	20cc/kg/24hrs

Example: 25 kg resident

first 10 kg	(10 x 100)	=	1000cc
second 10 kg	(10 x 50)	=	500cc
over 20 kg	(5 x 20)	=	<u>100 cc</u>
			1600cc/24hrs.

Medical Director's Signature: _____