Article 28 Facility

Operates with a certificate granted under Article 28 of the New York State Public Health Law

Regulated by the NYSDOH:

- Must have an Infection Control Committee
- Must comply with reporting requirements
  - Outbreaks
  - Single cases of reportable communicable disease
639 Article 28 LTC facilities in NY state
344 (54%) in MARO {Metropolitan Area Regional Office}

2% are Pediatric LTC
12 in NYS
8 in MARO

All follow same guidelines and reporting requirements
Hospitals and LTC Differ

- Payment systems- set rate, bedhold
- Availability of X-rays and lab tests
- Nurse-to-patient ratio

Focus is different:
- LTC carries out plan set by ACF
- Home for residents

Comfort, Dignity and Rights are Paramount
# Infection Preventionist

## Acute Care

- Dedicated role
- Nurse or Microbiologist
- Clerical Support
- Computerization
- Rapid patient turnover

## Long Term Care

- Multiple roles
- Usually Nursing
- No clerical support
- Paper chart
- Stay for months or years
Barriers in LTC

- No Infectious Disease MD
- Limited laboratory services
- Lack of Long Term Care research
- Lack of Standardization
  - Surveillance techniques
  - Definitions
  - Benchmarking
- Lack of time/priority
- Fear of Department of Health
Lack of Communication between ACF and LTC

Necessary Infection Control information:
- Infection Status
- Organism
- Treatment Status
- Cognitive Abilities
- Colonization Status
- Reason for lines/devices

Become a member of the Admissions Team
Prevention

Set up a Infection Control Program that includes:
- Surveillance
- Consultation and Education
- Hand Hygiene
- Environmental Cleanliness
- PPE and Precautions
- Vaccination
- Employee Health

All mentioned in Interpretive Guideline F441
Surveillance

Surveillance of healthcare associated infections is an indispensable tool in infection control, and is used for detecting problem areas, defining residents who are at risk and evaluating intervention strategies.

Interpretive Guideline F441: “Use records of infection incidents to improve infection control processes and take corrective action”
HAI Rate = 14

- No benchmarking for similar facilities
- Benchmark against self
  ✓ QI Team-stay below 15 is acceptable

Interpretive Guideline F441: “Use records of infection incidents to improve infection control processes and take corrective action”
Surveillance

Total House Surveillance
- Monitor all infections
- More accurate, more work

Targeted Surveillance
- One floor or unit
- One body sites- URI, UTI
Surveillance

Use whatever tools you have available to you:

- 24 hour reports
- Microbiology lab reports
- Pharmacy antimicrobial reports
- Request faxes or calls from units when antibiotic are ordered
- Make rounds and talk to staff
<table>
<thead>
<tr>
<th>Unit</th>
<th>Name</th>
<th>Infection</th>
<th>Treatment</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUW</td>
<td>John James</td>
<td>R/O pneumo</td>
<td>zithromax</td>
<td>8/9/10</td>
</tr>
<tr>
<td></td>
<td>Laura Moon</td>
<td>Urine Cx &gt;100 gnr-Ecoli</td>
<td>ciprofloxacin</td>
<td>8/10/10</td>
</tr>
<tr>
<td></td>
<td>Chris Mass</td>
<td>Thick yellow secretions</td>
<td>Tob nebs</td>
<td>8/9/10</td>
</tr>
<tr>
<td></td>
<td>Ann Smith</td>
<td>Spt cx- mod Acinto baum</td>
<td>augmentin</td>
<td>8/10/10</td>
</tr>
</tbody>
</table>

Do I have a respiratory issue on this unit?
Outbreak
Unusual cluster of illness

http://www.health.state.ny.us/forms/doh-4018.pdf

- Must report 3 or case of a pathogenic organism to the NYSDOH
- 1 case of influenza is an outbreak and must be reported
- Any case of invasive Streptococcus (Group A, B or Streptococcus pneumonia)

Outbreak investigation will HELP:

- What is the cause of the outbreak
- How is it transmitted
- How to prevent additional cases
- How to prevent future outbreaks
Team Work = Success

The NYSDOH is your FRIEND!!!

✧ Give recommendations
✧ What is going on in the community
✧ Expedite lab testing

Will ask you for:
✧ Line listing
✧ Date of onset, symptoms
✧ IC measures in place
## Invasive Streptococcus pneumoniae Outbreak

<table>
<thead>
<tr>
<th>RESIDENT</th>
<th>LOCATION/ROOM</th>
<th>DATE</th>
<th>SOURCE</th>
<th>TYPE</th>
<th>PFGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GZ</td>
<td>Toddler Rm 125</td>
<td>1/14/09</td>
<td>Blood</td>
<td>19A</td>
<td>Related, common source</td>
</tr>
<tr>
<td>JG</td>
<td>Toddler Rm 125</td>
<td>2/2/09</td>
<td>Blood</td>
<td>nonviable</td>
<td>Assumed related, common source</td>
</tr>
<tr>
<td>OD</td>
<td>Nursery Rm 226</td>
<td>2/5/09</td>
<td>Blood</td>
<td>19A</td>
<td>Related, common source</td>
</tr>
<tr>
<td>AM</td>
<td>Toddler Rm 116</td>
<td>4/30/09</td>
<td>Blood</td>
<td>19A</td>
<td>Related, common source</td>
</tr>
</tbody>
</table>

All residents previously vaccinated with Prevnar 7 series and booster Prevnar 13 approved by FDA Feb 2010- contains 19A- all residents vaccinated 5/10
Separate from the NYSDOH regulatory branch

Do not license or survey facilities

Do not cite deficiencies
Hand Hygiene

Surveyors shall observe staff hand hygiene practices during:

- Resident care - In and Out Campaign, FROG
- Medication administration
- Dressing changes – change gloves and perform hand hygiene when going from dirty to clean
- Resident dining - consider wipes for trays

Source: CMC F441 Guidance
Hand Hygiene

Alcohol Dispenser

- In lobby
- In hallways
- Outside elevators
- Outside/Inside resident rooms

No Alcohol Dispensers

- In bathrooms
- At sinks

Must wash with soap and water before:
- Visibly soiled
- Eating
- After using the bathroom
- Caring for a resident with loose stools
Social learning theories used to influence hand hygiene practices

We learn from others:

- Observational learning
- Imitation
- Modeling

To be successful:

- Need Infection Control Liaisons
- Consistent reinforcement and reminders
Seasonal Hand Hygiene Educational Campaigns

www.workingtowardszero.com

S.N.O.W.
Stop Nosocomial Organism by Washing

H.O.P.
Handwashing Offers Protection
Hand Hygiene Posters

got soap?

Amy Harrington, RN, CNI

Linda Braune RN, BSN, CNOR, CNIV

Deborah Mulloy, RN, MSN, CNOR, PeriOperative CNS

Raquel A. Amoloni, RN, CNI

Routine Handwashing - use Soft N Sure soap, wet skin - apply soap and wash for 10-15 seconds.
Antiseptic Hand rub - use Cal Stat alcohol-based hand rub - apply and rub until hands are dry.
Lotion - use Lotion Soft Skin Conditioner to keep hands in good condition.

New England Baptist Hospital

St. Mary’s Healthcare System for Children
Standard Precautions

The basic level of infection control precautions which are used, as a minimum, in the care of ALL patients.

Includes:

- Hand Hygiene
- Personal Protective Equipment - do risk assessment before any patient-care activity
- Respiratory hygiene and cough etiquette

Standard precautions are the routine and does not mean “NO” precautions
History of MDRO

- No Signs or Symptoms of active infection:
  - Standard Precautions
  - Modified Contact Precautions

- Active Infection: Contact Precautions
CDC Guidelines for Isolation Precautions
2007

Use precautions on a case by case basis in LTCFs

5 C’s to assess residents need for addition to Standard Precautions
1. Colonized
2. Cognizant
3. Compliant
4. Catheterized (device)
5. Continent/Wound
The Evolution of MRSA = The Evolution of Infection Prevention

Penicillin

S. aureus → Penicillin-resistant S. aureus
[1950s]

Methicillin

Penicillin-resistant S. aureus → Methicillin-resistant S. aureus (MRSA)
[1970s]

Vancomycin

Methicillin-resistant S. aureus → Vancomycin
[1997]

Vancomycin-resistant intermediate-resistant S. aureus (VISA)
[1990s]

Vancomycin-resistant enterococci (VRE)

CDC website

ST. MARY’S HEALTHCARE SYSTEM FOR CHILDREN
Case Study

An 81 year old male returns to his LTC residence following an acute care stay for dehydration. As part of the hospital infection control protocol, the man had a nasal surveillance swab performed, which yielded MRSA. He had no signs or symptoms of a MRSA infection at the hospital or on return to the LTCF. The resident is otherwise healthy, continent of urine and stool, and requires minimal assistance with ADL.
Question # 1

Does the resident require a private room, or does he need to share a room with another MRSA-positive resident?

SHEA/APIC guidelines suggest decisions should be made on resident’s current clinical status. Colonization does not require private room or shared room as resident is unlikely to transmit to other residents or the environment.

In most instances, STANDARD Precautions should suffice.
Question # 2

Should the resident be allowed to attend communal meals and activities?

YES

So important to maintain his Quality of Life!!!
Modified Contact Precautions

Healthcare worker contact with this MRSA-colonized resident could increase possibility of transmission to other resident and environment...

Standard precautions should include gowns and gloves when dealing with infected area.....
Change in Condition

The residence condition changes and he is no longer continent or otherwise unable to control bodily secretions.

The potential for transmission to other residents and contamination of the environment has increased.

Contact Precautions
Case Study # 2

A 78 year old woman returns to LTCF after a one week hospital stay for a broken hip and an additional 2 week stay in an acute rehabilitation center. At the rehab center, the woman had a urine culture sent for unclear reasons. The culture grew out Acinetobacter, sensitive only to imipenem. She was placed in a single room at the rehab center but was not placed on contact precautions. Upon return to the nursing home, she has no urinary catheter in place and has no fever or urinary symptoms.
Key Questions

The resident has no urinary symptoms, so is there a role for treatment or repeating the urine culture or performing urinalysis?

Any indications of at least 3 of the following:
- Fever (>38 degrees C)
- Chills
- New flank or suprapubic pain or tenderness
- Change in character of urine (pyuria)
- Worsening of mental or functioning status
Key Question
Should the resident be placed in a private room?

Resident is:
• Healthy
• Not totally dependent on staff for ADL

Standard Precautions apply

Should the resident be restricted from group activities and common areas?

NO
Case Study # 3

An 87 year old man was recently transferred to a LTC after a prolonged stay in an ICU. His hospital course was complicated by Clostridium difficile infection. The patient responded well to a 10 – day course of oral vancomycin and is no longer having diarrhea.
Key Questions
What type of Precautions are required?

What do we know about C difficle infections?

- Residents with active diarrhea with C difficle require Contact Precautions
- Hand washing with soap and water is critical
- Bleach solutions for cleaning is recommended

Our patient is:
- Medically stable
- No symptoms suggesting treatment failure or relapse

Standard Precautions
Key Question

Is there a role for repeat stool testing to document clearance of toxin?

No need for repeating stool toxin testing at the end of therapy as long as the resident is doing well.

As long as the resident is medically stable, a stool toxin test is not necessary for admission to LTC.
Recommendations for Discontinuing Isolation

CDC does not have recommendations for MDRO’s in LTCF

C difficle
24 hours after first formed stool
Do not re-culture if asymptomatic

MRSA/VRE
Use the 5 C’s to assess resident, and/or
Three negative cultures, collected one week apart from original site and off antibiotics for 1 week
PPE: Donning PPE

Gown First

Mask or respirator

Goggles or face shield

Gloves
Sequence for Removing PPE

- Gloves
- Face shield or goggles
- Gowns
- Mask or respirator
What Type of PPE Would you Wear?

- Giving a bath?
- Suctioning oral secretions?
- Transporting a resident in a wheel chair?
- Drawing blood from a patient?
- Taking vital signs?
- Cleaning an incontinent resident with diarrhea?
Environmental Cleaning

Cleaning Principles

◆ Minimize dust
◆ Clean from least soiled to most soiled areas
◆ Clean from high to low (debris falls to floor)
◆ Friction
◆ High touch areas more frequently-doorknobs, elevator buttons, light switches

Proper cleaning solutions

◆ EPA registered disinfectant- quaternary ammonium compounds, bleach solutions
◆ Contact time required
Environmental Cleaning

Terminal Cleaning—when a resident is moved or discharged from a room
All surfaces of the room cleaned, including:
✓ Inside and bottom of drawer
✓ Inside closets or lockers
✓ Equipment cords
✓ Soap and toilet paper dispensers
✓ Discard opened rolls of toilet paper, hygiene products

✓ Privacy curtains—terminally, quarterly and when visibly soiled

Monitor Cleaning
○ EOC Rounds
○ Fluorescent markers
○ Visitor and resident questionnaires
# Cleaning Schedule

<table>
<thead>
<tr>
<th>Patient Areas</th>
<th>As needed</th>
<th>After use</th>
<th>Twice a day</th>
<th>Daily</th>
<th>When Soiled</th>
<th>Quarterly</th>
<th>Terminally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning and Disinfecting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mattresses and pillows</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CNA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-touch surfaces such as telephone headsets, doorknobs, bed rails, light switches</td>
<td>√quat</td>
<td>√quat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy curtains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Waste Removal</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2007

Hand Hygiene Observations Surveillance Education Environmental Cleaning

15 % decrease in HAI rates

50% of infections were due to respiratory viruses
# 2007 Viral Respiratory Outbreaks

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Outbreaks</strong> (3 or more cases)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Residents Infected</strong></td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>(3-19 per outbreak)</td>
</tr>
<tr>
<td><strong>Length of Outbreak</strong></td>
<td>192 days</td>
</tr>
<tr>
<td></td>
<td>(17- 49 days)</td>
</tr>
<tr>
<td><strong>Residents to ACF</strong></td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>( 7 vented)</td>
</tr>
<tr>
<td><strong>Days in ACF</strong></td>
<td>245 days</td>
</tr>
<tr>
<td></td>
<td>(1- 20 days)</td>
</tr>
<tr>
<td><strong>RSV</strong></td>
<td>5 units, 36 residents</td>
</tr>
<tr>
<td><strong>Parainfluenza 1</strong></td>
<td>2 units, 33 residents</td>
</tr>
</tbody>
</table>
Band-Aid Solution

Contact/Droplet Precautions
Education
Reinforced Hand Hygiene
Cohorted staff
Lockdown units
Limited and restricted visitors
Increased environmental cleaning
Minimized floating

“Reactive more than Proactive”
Fever above 101°F with one of the following:

- Chills
- Headache or eye pain
- Sore throat
- Muscle ache
- New or increased cough
- Increased secretions
Definition Met

Contact/Droplet precautions initiated

Nasopharyngeal swab for Viral PCR:
✓ Quick turn around time - 24hrs
✓ If results are negative, resident removed from isolation and precautions are discontinued.
✓ No need for prolonged isolations
Positive Viral Swab

Resident remains on contact/droplet precautions

All roommates placed on contact/droplet precautions for the incubation period of the virus isolated

- Parainfluenza – 6 days
- RSV - 8 days
Removal of Isolation Precautions

- Positive resident re-swabbed after signs and symptoms diminish

- Negative culture report required to discontinue isolation

- Roommates come off of isolation after incubation period ends

- If roommate becomes positive, isolation extended for incubation period yet again
## Outcomes

<table>
<thead>
<tr>
<th>Year</th>
<th># of Outbreaks</th>
<th>Children Infected</th>
<th>Length of Outbreak</th>
<th>Children to ACF</th>
<th>Days in ACF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>6</td>
<td>92</td>
<td>192</td>
<td>29</td>
<td>245</td>
</tr>
<tr>
<td>2008</td>
<td>5</td>
<td>33</td>
<td>75</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>2009</td>
<td>5</td>
<td>22</td>
<td>58</td>
<td>4</td>
<td>23</td>
</tr>
</tbody>
</table>
SUCCESS

Proactive Team Approach

Standardized Case Definition

Earlier isolation and earlier identification
Questions about Reporting?

Metropolitan Area Regional Office
Eleanor Adams, MD, MPH, (914)-654-7149

Capital District Regional Office
Deb Simmerly, RN, (607)-432-2892

Western Regional Office
Ann Sullivan-Frohm, (716)-847-4323
St. Mary’s Healthcare System for Children

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