INFECTION PREVENTION

‘IT’S A BUGGY BUSINESS’

Candi Shearen R.N., BC, CIC
Director of Education and Infection Prevention; Welcov Healthcare
Nothing to disclose
I like BUGS!

And have obviously liked them for a very long time!!!

Candi…. Outside her favorite room
Objectives

- State the major changes in LTC Infection Prevention Federal Law
- Describe the major components of an effective surveillance program in LTC
- Explain when and how transmission based precautions are utilized in LTC
NEW SNF Requirements of Participation

- Draft July 16, 2015 Federal Register
- Final September 28, 2016 – become effective November 28, 2016
  - Implemented in three phases
    - Phase 1: November 28, 2016 (All IPC Program regs)
    - Phase 2: November 28, 2017 (Risk Assessment / Antibiotic Stewardship Program – ASP)
    - Phase 3: November 28, 2019 (IPCO and QAPI integration)
MUST HAVE IPCO – he/she must have more training beyond their professional degree (Phase 3)
- No actual number in regulation but CMS IP consultant recommending 16 hour class
  - CMS and CDC working on training to fit this requirement
  - Many programs in country already available

This IPCO must be a member of the facilities QAPI committee and report to that committee on the IP and control program on a regular basis. (Phase 3)

MUST HAVE an antibiotic stewardship program that would include antibiotic use protocols as well as monitoring the antibiotic use in the facility. (Phase 2)
- Suggests need to work with a pharmacist
- USE CDC Core Measures for Nursing Homes
Summary of Core Elements for Antibiotic Stewardship in Nursing Homes

**Leadership commitment**
Demonstrate support and commitment to safe and appropriate antibiotic use in your facility

**Accountability**
Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility

**Drug expertise**
Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility

**Action**
Implement at least one policy or practice to improve antibiotic use

**Tracking**
Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in your facility

**Reporting**
Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

**Education**
Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use
Immunizations moved to IPC Regulation

- Influenza (Resident can state HX of influenza Vaccine)
- Pneumococcal
  - PCV13 (Prevnar 13)
  - PPSV23
Infection Prevention Changes (CONT)

- Most likely will be broken up into several tags as was prior to the last update in 2009
- System for preventing, reporting, investigating and controlling infections and communicable diseases (must review and update program policy at least annually and as needed)
  - Surveillance system to ID possible communicable diseases before they spread – including definitions of infection
  - ID when and to whom possible infections should be reported – including state specific reportable diseases and performance improvement with incidents/outbreaks
  - Transmission-based prevention Precautions
    - ID when precautions should be used for resident AND removed
  - Circumstances when employees with infections (including skin lesions) must avoid direct contact with residents or their food
  - Hand hygiene procedures.
  - Risk assessment for individuals and for facility (Phase 2)
# Infection Control Long Term Care Risk Assessment

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<tbody>
<tr>
<td></td>
<td>Very Likely</td>
<td>Catastrophic Loss (life/limb/function/financial)</td>
<td>None</td>
<td>5</td>
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<tr>
<td></td>
<td>Likely</td>
<td>Serious Loss (function/financial)</td>
<td>Poor</td>
<td>4</td>
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<tr>
<td></td>
<td>Maybe</td>
<td>Risk of Re-admission</td>
<td>Fair</td>
<td>3</td>
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<tr>
<td></td>
<td>Rare</td>
<td>Transfer to High</td>
<td>Good</td>
<td>2</td>
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<tr>
<td></td>
<td>Never</td>
<td>Minimal Clinical/Financial</td>
<td>Very Good</td>
<td>1</td>
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<tr>
<td><strong>ABX Resistant Organisms</strong></td>
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<tr>
<td>MRSA</td>
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<td>CDiff</td>
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<tr>
<td>VRE</td>
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<tr>
<td>ESBL/other Gram Negative bacteria</td>
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<tr>
<td><strong>Prevention</strong></td>
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<tr>
<td>Lack of Hand Hygiene</td>
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<tr>
<td>Lack of Respiratory Hygiene of Cough</td>
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<tr>
<td>Etiquette</td>
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<tr>
<td>Improper Glove Use</td>
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<tr>
<td>Lack of ABX</td>
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<tr>
<td>Stewardship Program</td>
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<tr>
<td>Lack of Resident Influenza Vaccination</td>
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<tr>
<td>Lack of Resident Pneumovax</td>
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<tr>
<td><strong>Isolation</strong></td>
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<tr>
<td>Lack of Standard Precautions</td>
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</table>
Infection Control Assessment Tool for Long-term Care Facilities

This tool is intended to assist in the assessment of infection control programs and practices in nursing homes and other long-term care facilities. If feasible, direct observations of infection control practices are encouraged. To facilitate the assessment, health departments are encouraged to share this tool with facilities in advance of their visit.

Overview

Section 1: Facility Demographics

Section 2: Infection Control Program and Infrastructure

Section 3: Direct Observation of Facility Practices (optional)

Section 4: Infection Control Guidelines and Other Resources

Infection Control Domains for Gap Assessment

I. Infection Control Program and Infrastructure

II. Healthcare Personnel and Resident Safety

III. Surveillance and Disease Reporting

IV. Hand Hygiene
CMS Nursing Home and Hospital IPC project

- 3 year project to improve assessment of IPC regulations in nursing homes and hospitals and during transitions of care
- Will be unannounced surveys
- Main purpose is education – no citations unless IJ
- 2016 – completing 10 pilot nursing home surveys
- 2017 – will do 40 hospitals and 40 nursing home surveys
  - Will review findings with facilities
  - Will give Technical assistance
- 2018: Revisit surveys
The intent of this regulation is to assure that the living center develops, implements, and maintains an Infection Prevention and Control Program.

- Perform surveillance and investigation to prevent, to the extent possible, the onset and the spread of infection;
- Prevent and control outbreaks and cross-contamination using transmission-based precautions in addition to standard precautions.
Use records of infection incidents to improve its infection prevention processes and outcomes by taking corrective actions, as indicated;

Implement hand hygiene (hand washing) practices consistent with accepted standards of practice, to reduce the spread of infections and prevent cross-contamination; and

Properly store, handle, process, and transport linens to minimize contamination.
BASE of IP program is Surveillance

CDC Definition:

“The ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know.”
Surveillance – basic facts…

• Surveillance is most essential component of an effective infection prevention program. Elements of a surveillance system include:
  - Use of surveillance tools such as infection surveys and data collection templates, walking rounds throughout the facility. (iscrub for IPAD or IPhone)
  - Use of standardized definitions and listings of the symptoms of infections. (SHEA guidelines – published in September 2012 in ICHE)
Definition Criteria Background

- Original McGeer definitions written by multidisciplinary team with common interest in LTC
  - Based on available literature
  - Consensus discussion
  - NNIS (National Nosocomial Infection Surveillance Definitions)

- Published in AJIC (American Journal of Infection Control) 1991
Rationale for Revision

- Resident population/diseases/care needs changed
- Improved diagnostics to assist with surveillance
- Increase in evidence-based literature
- NHSN hospital definitions
For infection surveillance purposes, infections should be attributed to a LTCF onset if:

There is no evidence of an incubating infection at the time of admission to the facility (on the basis of clinical documentation of appropriate signs and symptoms and not solely on screening microbiologic data)

AND

Onset of clinical manifestation occurs >2 calendar days after admission.
3 conditions should be met when applying the new surveillance definitions:

1. Symptoms must be new or acutely worse.
2. Non-infectious causes of signs and symptoms should be considered and evaluated before an event is considered an infection.
3. Identification of infection should consider the clinical presentation and any microbiologic or radiologic information that is available.
   - Microbiologic and radiologic findings should not be the only criteria for defining an event as an infection.
   - Diagnosis by a physician alone also is not sufficient for a surveillance definition of infection and must be accompanied by documentation of compatible signs and symptoms. (DX of an infection is NOT based on these definitions. They are solely for surveillance purposes – LOEB criteria for Clinicians)
Definitions for Constitutional Criteria

- **Fever**
  - Single oral temperature >100°F
  - OR
  - Repeated oral temperatures >99°F or rectal temperatures >99.5°F
  - OR
  - Single temperature >2°F over baseline from any site (oral, tympanic, axillary)

- **Leukocytosis**
  - Neutrophilia (>14,000 leukocytes/mm³)
  - OR
  - Left shift (>6% bands or ≥1,500 bands/mm³)
Definitions for Constitutional Criteria

- Acute change in mental status from baseline (all of the following criteria must be present; see Confusion Assessment Criteria for evidence of change – next slide)
  - Acute onset
  - Fluctuating course
  - Inattention

AND

- Either disorganized thinking or altered level of consciousness
# Confusion Assessment Method Criteria

<table>
<thead>
<tr>
<th>Acute Onset</th>
<th>Evidence of acute change in resident’s mental status from baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluctuating</td>
<td>Behavior fluctuating (coming and going or changing in severity during the assessment)</td>
</tr>
<tr>
<td>Inattention</td>
<td>Resident has difficulty focusing attention (e.g., unable to keep track of discussion or easily distracted)</td>
</tr>
<tr>
<td>Disorganized thinking</td>
<td>Resident’s thinking is incoherent (e.g., rambling conversation, unclear flow of ideas, unpredictable switches in subject)</td>
</tr>
<tr>
<td>Altered level of consciousness</td>
<td>Resident’s level of consciousness is described as different from baseline (e.g., hyperalert, sleepy, drowsy, difficult to arouse, nonresponsive)</td>
</tr>
</tbody>
</table>

Note: Criteria are adapted from a study by Lim and MacFarlane.
Definitions for Constitutional Criteria

- **Acute functional decline**
  - A new 3-point increase in total activities of daily living (ADL) score (range, 0-28) from baseline, based on the following 7 ADL items, each scored from 0 (independent) to 4 (total dependence)
    - Bed mobility
    - Transfer
    - Locomotion within LTCF
    - Dressing
    - Toilet use
    - Personal hygiene
    - Eating
### Surveillance Programs… What should be included?

<table>
<thead>
<tr>
<th>Points to Consider</th>
<th>Infections</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Infections which should not be routinely included in surveillance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited</td>
<td>Ears, Sinus, Oral infections, Fungal, or Viral (herpetic) skin infections</td>
<td>Rarely transmitted Associated co-morbid conditions</td>
</tr>
<tr>
<td>1. Transmissibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Preventability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At Risk Populations:</td>
<td>Post-op; CLABSI; VAP</td>
<td>NHSN definitions</td>
</tr>
<tr>
<td><strong>B. Infections that should be routinely included in surveillance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Transmission evident</td>
<td>ILI; <em>C-Difficile</em>, Viral Gastroenteritis and Conjunctivitis</td>
<td>Associated outbreaks in Residents and HCWs</td>
</tr>
<tr>
<td>2. Prevention possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Significant Clinical</td>
<td>LRTI; UTI; SSTIs, Pressure Ulcers</td>
<td>Associated morbidity and hospitalizations</td>
</tr>
<tr>
<td>4. Serious Outbreaks</td>
<td>Gr A Strep; Scabies; Flu; Viral Hepatitis; Norovirus</td>
<td>Rare, Highly contagious</td>
</tr>
</tbody>
</table>
What are the significant changes?

- Added *C-difficile* and Norovirus under Gastroenteritis
- Influenza can be diagnosed all year long
- Eye infections are under mucosal/skin category
- More specific criteria for most definitions
We should identify the processes or outcomes selected for surveillance and statistical analysis of data that uncover an outbreak and give...

Feedback of results to the primary caregivers so that they can assess the residents for signs of infection. (Dissemination of information)

Total house surveillance USUALLY done in LTC, Acute care does target surveillance

- Dr. Stone from CDC recommending we do more target surveillance in LTC

Two types of surveillance

- (Process and outcome) should be implemented in living centers.
Process Surveillance
Practices related to resident care

- Minimizes exposure to a potential source of infection;
- Uses appropriate hand hygiene prior to and after all procedures.
- Ensures that appropriate sterile/aseptic techniques are followed; for example, that staff:
  - Use sterile/non-sterile gloves, fluids, and materials, when indicated depending on the site and the procedure
  - Avoid contaminating sterile procedures.
  - Ensure that contaminated/non-sterile items are not placed in a sterile field.
  - Uses Personal Protective Equipment (PPE) when indicated.
Process Surveillance (cont…)

- Ensures that reusable equipment is appropriately cleaned, disinfected, or reprocessed; and

- Uses single-use medication vials and other single use items appropriately (proper disposal after every single use).
Outcome Surveillance

Identify and Report Infection

- Documentation
- Monitoring
- Data Analysis
- Communicable Disease Reporting
- Education
- Antibiotic Review – with pharmacy and lab data
Two Surveillance questions you ALWAYS ask....

- Is infection present?

- Is it HAI (HealthCare Acquired Infection) or CAI (Community Acquired Infection)

  - Determine by time:
    - 3 day rule for bacteria
    - Incubation Period for Viruses

  - Exceptions:
    - SSI = 30 days
    - Implant = 90 days
Best Practices for Surveillance

- Walking rounds daily – GUM SHOE method
  - Any subtle changes in the residents – ask CNAs, housekeepers, licensed staff etc.....
  - Any clusters/outbreaks – residents or employees
  - View/document line listing of infections; 24 hour reports; shift to shift reports
  - Educate on infection definitions
  - Resident/family interviews

- Discuss at facility clinical meeting:
  - View lab results – anything unusual?
  - View ATB use
  - View Nursing Notes (especially if electronic)

- Evaluate new admissions/readmission charts
Surveillance importance:

- Data collection and analysis of your data
  - Resident Line listing – remember this just means you are evaluating them to see if they meet the criteria for infection – does NOT mean you count them!
    - Monthly resident infection line listing
  - Employee Infections Line Listing
# Urinary Tract Infection

## Non-Catheterized Resident

<table>
<thead>
<tr>
<th>Both criteria 1 and 2 must be present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At least 1 of the following sign or symptom subcriteria</td>
</tr>
<tr>
<td>a. Acute dysuria or acute pain, swelling, or tenderness of the testes, epididymis, or prostate</td>
</tr>
<tr>
<td>b. Fever or leukocytosis (see Table 2) and at least 1 of the following localizing urinary tract subcriteria</td>
</tr>
<tr>
<td>i. Acute costovertebral angle pain or tenderness</td>
</tr>
<tr>
<td>ii. Suprapubic pain</td>
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<tr>
<td>iii. Gross hematuria</td>
</tr>
<tr>
<td>iv. New or marked increase in incontinence</td>
</tr>
<tr>
<td>v. New or marked increase in urgency</td>
</tr>
<tr>
<td>vi. New or marked increase in frequency</td>
</tr>
<tr>
<td>c. In the absence of fever or leukocytosis, then 2 or more of the following localizing urinary tract subcriteria</td>
</tr>
<tr>
<td>i. Suprapubic pain</td>
</tr>
<tr>
<td>ii. Gross hematuria</td>
</tr>
<tr>
<td>iii. New or marked increase in incontinence</td>
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<td>iv. New or marked increase in urgency</td>
</tr>
<tr>
<td>v. New or marked increase in frequency</td>
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</tbody>
</table>

## Catheterized Resident

<table>
<thead>
<tr>
<th>Both criteria 1 and 2 must be present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At least 1 of the following sign or symptom subcriteria</td>
</tr>
<tr>
<td>a. Fever, rigors, or new-onset hypotension, with no alternate site of infection</td>
</tr>
<tr>
<td>b. Either acute change in mental status or acute functional decline, with no alternate diagnosis and leukocytosis</td>
</tr>
<tr>
<td>c. New-onset suprapubic pain or costovertebral angle pain or tenderness</td>
</tr>
<tr>
<td>d. Purulent discharge from around the catheter or acute pain, swelling, or tenderness of the testes, epididymis, or prostate</td>
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</tbody>
</table>

## Both criteria 1 and 2 must be present

<table>
<thead>
<tr>
<th>Catheterized Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At least 10^5 cfu/mL of no more than 2 species of microorganisms in a voided urine sample</td>
</tr>
<tr>
<td>2. Urinary catheter specimen culture with at least 10^7 cfu/mL of any organism(s)</td>
</tr>
</tbody>
</table>

### NOTE:
Pyuria does not differentiate symptomatic UTI from asymptomatic bacteriuria. Absence of pyuria in diagnostic tests excludes symptomatic UTI in residents of long term care facilities.

(cfu: colony-forming units.)

In the absence of a clear alternate source of infection, fever or rigors with a positive urine culture result in the non-catheterized resident or acute confusion in the catheterized resident will often be treated as UTI. However, evidence suggests that most of these episodes are likely not due to infection of a urinary source.

**UTI should be diagnosed when there are localizing genitourinary signs and symptoms and a positive urine culture result. A diagnosis of UTI can be made without localizing symptoms if a blood culture isolate is the same as the organism isolated from the urine and there is no alternate site of infection.**

**Recent catheter trauma, catheter obstruction, or new-onset hematuria are useful localizing signs that are consistent with UTI but are not necessary for diagnosis.**

**Urine specimens for culture should be collected following replacement of the catheter (if current catheter has been in place for >14 d).**

---

**NOTE:** Pyuria does not differentiate symptomatic UTI from asymptomatic bacteriuria. Absence of pyuria in diagnostic tests excludes symptomatic UTI in residents of long term care facilities.

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**Urine specimens for culture should be collected following replacement of the catheter (if current catheter has been in place for >14 d).**
### Constitutional Criteria for Infection

#### Definitions

1. **Respiratory Tract Infection**
2. **Lung不要定infections**: (LRTI) i.e. bronchitis, tracheobronchitis
3. **Other conditions**

#### Check box only after criteria have been met

- [ ] Respiratory Tract Infection
- [ ] Pneumonia
- [ ] Lower respiratory tract infections: (LRTI) i.e. bronchitis, tracheobronchitis
- [ ] Other conditions

#### Criteria

<table>
<thead>
<tr>
<th>Infection/Site</th>
<th>Criteria</th>
<th>Conditions and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory Tract Infection</strong></td>
<td>1. Common Cold Syndrome or Pharyngitis</td>
<td>Fever may or may not be present. Symptoms must be acute (new) and not attributable to allergies (seasonal or Medicinal)</td>
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<tr>
<td></td>
<td>At least 2 criteria must be present</td>
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<tr>
<td></td>
<td>Runny nose or sneezing</td>
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<td></td>
<td>Stuffy nose (nasal congestion)</td>
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<td>Sore throat or hoarseness or difficulty swallowing</td>
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<td>Dry cough</td>
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<td></td>
<td>Swollen or tender glands in neck (Cervical lymphadenopathy)</td>
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</tr>
<tr>
<td><strong>Influenza-like illness</strong></td>
<td>1. Fever</td>
<td>If criteria for influenza-like illness and another upper or lower respiratory tract infections (RTI) are met at the same time, only the diagnosis of influenza-like illness should be recorded. Seasonality is no longer a criterion to define influenza-like illness because of the increasing uncertainty surrounding the timing of the start of the influenza season, the peak of influenza activity, and the length of the season.</td>
</tr>
<tr>
<td>Criteria 1 and 2 must be present</td>
<td>2. MUST HAVE at least 3 of the following:</td>
<td></td>
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<tr>
<td>Did resident receive influenza vaccine before or during this flu season?</td>
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<tr>
<td>Yes</td>
<td>Sore throat</td>
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</tr>
<tr>
<td>No</td>
<td>New or increased dry cough</td>
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<tr>
<td></td>
<td>New or increased sputum production</td>
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<tr>
<td></td>
<td>Oxygen sat &lt;94% on room air or an increase in Oxygen sat=3% from baseline</td>
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<tr>
<td></td>
<td>New or changed lung examination abnormalities (rales, rhonchi, wheeze)</td>
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<tr>
<td></td>
<td>Pleuritic chest pain</td>
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<td></td>
<td>Increased respiratory rate (&gt;25/min)</td>
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<td>Malaise or loss of appetite</td>
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<td></td>
<td>Myalgias or body aches</td>
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<tr>
<td><strong>Pneumonia</strong></td>
<td>1. Chest x-ray demonstrating pneumonia, or a new infiltrate.</td>
<td>For both pneumonia and LRTI, the presence of underlying conditions that could mimic the presentation of a RTI (ex: congestive heart failure (CHF) or interstitial lung diseases) should be excluded by a review of clinical records and an assessment of presenting symptoms and signs... NOTE: THIS DIAGNOSIS CAN BE MADE ONLY IF A CHEST X-RAY WAS TAKEN</td>
</tr>
<tr>
<td>(All 3 criteria must be present)</td>
<td>2. At least 1 of the respiratory subcriteria:</td>
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<tr>
<td></td>
<td>New or increased cough</td>
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</tr>
<tr>
<td></td>
<td>New or increased sputum production</td>
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<td></td>
<td>Increased respiratory rate (&gt;25 breaths/min)</td>
<td></td>
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<tr>
<td><strong>Other conditions</strong></td>
<td>1. Chest x-ray not performed or negative results for pneumonia or new infiltrate:</td>
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<tr>
<td></td>
<td>At least 2 of the respiratory subcriteria:</td>
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<td>New or changed lung examination abnormalities (rales, rhonchi, wheeze)</td>
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<tr>
<td></td>
<td>Pleuritic chest pain</td>
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<td></td>
<td>Respiratory rate (&gt;25 breaths/min)</td>
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<td></td>
<td>At least one of the constitutional criteria</td>
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<tr>
<td></td>
<td>Increased respiratory rate (&gt;25/min), worsening of mental or functional status.</td>
<td></td>
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</tbody>
</table>
### LINE LISTING OF RESIDENT INFECTIONS

**Month___________ Year______**

<table>
<thead>
<tr>
<th>Room_____ Unit______</th>
<th>Name_______________</th>
<th>Admission date___________</th>
<th>Type of Infection___________</th>
<th>If UTI, foley present? Yes/ No</th>
<th>Symptoms/Date</th>
<th>Cultures: Date/Site/Results</th>
<th>Treatment</th>
<th>Other actions (if needed)</th>
<th>Does not meet infection criteria</th>
<th>HAI</th>
<th>CAI</th>
</tr>
</thead>
<tbody>
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**HAI = healthcare-associated infection**  **CAI = community acquired infection**
Data Analysis

- Oversee infections and spot trends/clusters/outbreaks

  - Collect info during surveillance
    - Categorizes each infection by body site and according to whether they are in-house or community acquired.

  - Distinguishes infection rates – number of infections per 1000 patient days – for each unit and for entire facility (template – computes rates for you)
    - Patient day refers to one patient in one bed for one day
<table>
<thead>
<tr>
<th>Infection Type</th>
<th>01/01</th>
<th>02/01</th>
<th>03/01</th>
<th>04/01</th>
<th>05/01</th>
<th>06/01</th>
<th>07/01</th>
<th>08/01</th>
<th>09/01</th>
<th>10/01</th>
<th>11/01</th>
<th>12/01</th>
<th>Total</th>
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<td>mouth and peri-oral infections</td>
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</tbody>
</table>

**Total # of HAI infections**: 0

**Unit census**: 0

**Total Rate of Infection by month**: 0

**Last year's rate of infection by month**: 0.7
Report at QAPI…..

- NOT just your numbers…..
- ANALYZE your data and INTERPRET your findings
- What did you do with incidents?
  - RCA (Root Cause Analysis)
  - Break in system or System change needed?
  - Training
  - Auditing
Regarding physicians

- Education regarding the revised definitions and the LOEB criteria for Clinicians
- Assess first, then call
  - Give option of not treating
  - Antibiotic use is not equivalent to infection diagnosis
- Antibiotic Stewardship
Precautions in LTC

**CONTACT PRECAUTIONS**
(In addition to Standard Precautions)

**Visitors:** Report to nurse prior to entering

- **Hand Hygiene:**
  - Wash hands or perform alcohol hand gel according to Standard Precautions

- **Gloves:**
  - Wear gloves when entering room or cubicle
  - Wear gloves whenever touching resident or their environment
  - Remove gloves before leaving room

- **Gowns:**
  - Wear gown when entering room or cubicle
  - Remove gown and observe hand hygiene before leaving the room

- **Resident Equipment:**
  - Dedicate equipment as able/needed
Standard precautions

- Treat all cares/treatments of ALL residents as if their body fluids are infected. Utilize barriers with:
  - Blood
  - All body fluids, secretions & excretions except sweat regardless of whether or not they contain visible blood
  - Non-intact skin
  - Mucous Membranes

- Utilize PPE (Personal Protective Equipment) with contact
PPE /Barriers

- **Gloves**
  - Indicated for procedures where body fluids are handled
  - Never exit a room with gloves on
  - Wash – Glove – Wash

- **Gowns, Aprons and Other Protective Clothing**
  - Indicated for use when performing tasks that will likely soil the employee’s clothing with infective material – when entering contact precaution room

- **Masks, Eye Protection and Face Shields**
  - Indicated when splashing, spatter, spraying or generation of droplets of body fluids.
Sequence for Donning PPE

- Gown first
- Mask or respirator
- Goggles or face shield
- Gloves
Sequence for Removing PPE

- Gloves
- Face shield or goggles
- Gown
- Mask or respirator
Transmission Based precautions

- Used WITH standard precautions
- Designed for residents documented or suspected to be infected or colonized with highly transmissible or epidemiologically important pathogens
- Three types that may be combined depending on disease type
  - Contact
  - Droplet
  - Airborne (Most LTC facilities don’t use this but must have something in place for suspected cases)
Transmission based Precautions

(Continued)

- Determination of type and duration of precaution used:

Appendix A Isolation Guidelines

- EXAMPLE: Abscess – Draining major versus Abscess – draining minor or limited.
Transmission based Precautions

(Continued)

- Base on conditions that facilitate transmission
  - Uncontained respiratory secretions
  - Coughing or sneezing
  - Uncontained copious wound drainage
  - Diarrhea

- Determine Resident being out of room:
  - 4 Cs – Clean; Contained; Cooperative and Cognitive!
Contact Precautions

- Residents known or suspected to have serious illnesses easily transmitted by direct resident contact or by contact with items in the resident’s environment.
- Private room, cohort with same organism, or low risk resident
- Gloves with direct or indirect contact of resident/environment
- Gowns when entering room
- Dedicate equipment

Transmission based Precautions (Continued)

CONTACT PRECAUTIONS
(In addition to Standard Precautions)

Visitors: Report to nurse prior to entering

Hand Hygiene:
- Wash hands or perform alcohol hand gel according to Standard Precautions

Gloves:
- Wear gloves when entering room or cubicle
- Wear gloves whenever touching resident or their environment
- Remove gloves before leaving room

Gowns:
- Wear gown when entering room or cubicle
- Remove gown and observe hand hygiene before leaving the room

Resident Equipment:
- Dedicate equipment as able/needed
Transmission Based precautions
(Continued)

- **Droplet Precautions**
  - Use for residents with infections that can be transmitted by droplet
  - Private room, cohort with same infection or low risk resident.
    - If low risk resident, must maintain spacial separation of at least 6 feet between the infected resident and other residents/visitors
  - Door may remain open
  - Mask when entering room / cubicle
  - Resident should wear mask during transport outside room

- **Airborne Precautions**
  - MUST have Airborne Isolation Rooms in order to do this in LTC

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**DROPLET PRECAUTIONS**
(In addition to Standard Precautions)

- **Visitors:** Report to nurse prior to entering

  - **Hand Hygiene:**
    - Wash hands or perform alcohol hand gel according to Standard Precautions

  - **Gloves:**
    - Wear gloves if handling tissues or other items with infective material or environment that could be contaminated with infective material
    - Remove gloves before leaving room

  - **Masks:**
    - Wear masks when entering room or cubicle
    - Remove mask and observe hand hygiene before leaving the room
Respiratory / cough etiquette

- Use along with Droplet Precautions
- Cover your nose/mouth when cough/sneeze
- Use tissues to contain respiratory secretions and dispose of them in the nearest waste receptacle after use
- Wash hands or use ABHR (alcohol based hand rub) after having contact with respiratory secretions and contaminated objects/materials
C-Diff *(clostridium difficile)*

- Contact precautions in place when ‘active’ symptoms.
  - Removed 24-72 hours after watery stools have subsided
- May leave room if stool contained, good hygiene and uses hand hygiene. Remember the 4 Cs with transmission based precautions (Cognition/Clean/Cooperative/Contained)
- DO NOT DO f/u cultures
- Can cohort with another c-diff or low risk roommate
- Handwashing with soap and water – more effective than alcohol gel
- CLEANING ENVIRONMENT KEY… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
  - Dedicate equipment – including commode if no private BR
  - Commode liners
VRE (Vancomycin Resistant Enterococcus)

- Contact precautions in place – modified per individual case
  - Retesting not required and not recommended. Remove from precautions when signs and symptoms have resolved
- May leave room if contained, good hygiene and uses hand hygiene. Use 4 C’s
- Can cohort with another VRE resident or low risk roommate
- If VRE newly diagnosed and patient/resident has shared a room with another person, roommate’s stool or rectal swab should be considered
- CLEANING ENVIRONMENT KEY… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
- Dedicate equipment
- Spread primarily through environment and HCWs hands – STRICT hand hygiene!
MRSA (Methicillin Resistant Staphlococcus Aureus)

- Contact precautions in place – modified per individual case
  - Any site with active MRSA
  - Colonized Foley catheter associated MRSA
  - Wounds heavily colonized with MRSA
  - Tracheostomy patients colonized sputum that are unable to handle secretions
- May leave room if contained, good hygiene and uses hand hygiene. Use 4 Cs
- Retesting not required and not recommended. Remove from precautions when signs and symptoms have resolved
- Can cohort with another MRSA resident or low risk roommate
- CLEANING ENVIRONMENT KEY… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
- Dedicate equipment
- Spread primarily through HCW's hands – STRICT hand hygiene
ESBL (Extended spectrum beta-lactamases)

- Contact precautions in place – modified per individual case
- May leave room if contained, good hygiene and uses hand hygiene. Use 4 C’s
- Retesting not required and not recommended. Remove from precautions when signs and symptoms have resolved
- Can cohort with another ESBL resident or low risk roommate
- CLEANING ENVIRONMENT KEY… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
- Dedicate equipment
- Spread primarily through environment and HCWs hands – STRICT hand hygiene
A. baumanii (Acinetobacter baumannii - AB)

- Contact precautions in place – modified per individual case
- May leave room if contained, good hygiene and uses hand hygiene. Use the 4 Cs
- Retesting not required and not recommended. Remove from precautions when signs and symptoms have resolved
- Can cohort with another AB resident or low risk roommate
- CLEANING ENVIRONMENT KEY… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
- Dedicate equipment
- Spread primarily through HCWs hands – STRICT hand hygiene
CRE (carbapenem-resistant Enterobacteriaceae)

- **STRICT** Contact Precautions.
- No current guidelines to remove from precautions
- May leave room if wound secretions are contained, are continent, has good hygiene and uses reliable good hand hygiene.
  - Ensuring therapy and other rehabilitation treatments and activities are performed at routine locations (e.g., therapy/rehabilitation room, hallway) Resident should perform hand hygiene and have clean clothing/gown prior to leaving the room. These activities should be IN resident room if do not meet above criteria
- Can cohort with another CRE resident or private room – Can be dangerous to Neutropenic resident – should not share caregiver with CRE patient
- **CLEANING ENVIRONMENT KEY**… NOT JUST HIGH TOUCH AREAS BUT ALL AREAS of room
- Dedicate equipment
- Spread primarily through environment and HCWs hands – **STRICT** hand hygiene
- When to do CHG bathing
Infection Control F441 Guidance
http://www.cms.hhs.gov/transmittals/downloads/R52SOMA.pdf - also in Infection Control manual

Only EPA registered products effective against c-diff can be used for cleaning rooms where residents have active disease -- website has names of products that fit into this category: www.epa.gov/oppad001/list_i_clostridium.pdf

Surveillance Definitions of Infection in Long-Term Care Facilities: Revisiting the McGeer Criteria

Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term (Loeb Criteria)

SUGGESTED READINGS/REFERENCES (cont.)

- Ready References to Microbes: Kathy Brooks RN, PHD, CIC; 3rd Edition. APIC press
Bottom Line

Infection Prevention must be an important part of our LTC facilities programs

Go forth and conquer!
Questions and Discussion