Snippets and Pearls: Regs, Resources and Bugs

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APIC Consulting Services, Inc
February 22, 2019
No disclosures.

This work is funded by an award from the U.S. Centers for Disease Control and Prevention through the Chicago Department of Public Health.
Objectives

• Appreciate the Federal and State Regulations important to long term care facilities.

• Identify Centers for Disease Control and Prevention resources relevant to long term care facilities.

• Recognize the current organisms of concern in the metropolitan Chicago area.

• Describe how use of the XDRO Registry can be integrated into the admission process and add value to the control of extensively drug resistant organisms.
Federal and State Regulations
Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities

A Rule by the Centers for Medicare & Medicaid Services on 10/04/2016

AGENCY:
Centers for Medicare & Medicaid Services (CMS), HHSS.

ACTION:
Final rule.

SUMMARY:
This final rule will revise the requirements that Long-Term Care facilities must meet to participate in the Medicare and Medicaid programs. These changes are necessary to reflect the substantial advances that have been made over the past several years in the theory and practice of service delivery and safety. These revisions are also an integral part of our efforts to achieve broad-based improvements both in the quality of health care furnished through federal programs, and in patient safety, while at the same time reducing procedural burdens on providers.

DATES:
Effective date: These regulations are effective on November 28, 2016.

The Guide Book

State Operations Manual
Appendix PP - Guidance to Surveyors for Long Term Care Facilities

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(Rev. 173, 11-22-17)

Transmittals for Appendix PP

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DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop C2-21-16
Baltimore, Maryland  21244-1850

Center for Clinical Standards and Quality/Survey & Certification Group

DATE:  November 24, 2017
TO:    State Survey Agency Directors
FROM:  Director
        Survey and Certification Group

SUBJECT:  Temporary Enforcement Delays for Certain Phase 2 F-Tags and Changes to
          Nursing Home Compare

Memorandum Summary

•  Temporary moratorium on imposing certain enforcement remedies for specific Phase 2 requirements: CMS will provide an 18 month moratorium on the imposition of certain enforcement remedies for specific Phase 2 requirements. This 18 month period will be used to educate facilities about specific new Phase 2 standards.

•  Freeze Health Inspection Star Ratings: Following the implementation of the new LTC survey process on November 28, 2017, CMS will hold constant the current health inspection star ratings on the Nursing Home Compare (NHC) website for any surveys occurring between November 28, 2017 and November 27, 2018.

•  Availability of Survey Findings: The survey findings of facilities surveyed under the new LTC survey process will be published on NHC, but will not be incorporated into calculations for the Five-Star Quality Rating System for 12 months. CMS will add indicators to NHC that summarize survey findings.

•  Methodological Changes and Changes in Nursing Home Compare: In early 2018, NHC health inspection star ratings will be based on the two most recent cycles of findings for standard health inspection surveys and the two most recent years of complaint inspections.

Background

On September 28, 2016, CMS revised the SNF and NF Requirements for Participation, which
Moratorium

• Includes the following F-Tags:
  – F655 (Baseline Care Plan); §483.21(a)(1)-(a)(3)
  – F740 (Behavioral Health Services); §483.40
  – F741 (Sufficient/Competent Direct Care/Access Staff-Behavioral Health); §483.40(a)(1)-(a)(2)
  – F758 (Psychotropic Medications) related to PRN Limitations §483.45(e)(3)-(e)(5)
  – F838 (Facility Assessment); §483.70(e)
  – F881 (Antibiotic Stewardship Program); §483.80(a)(3)
  – F865 (QAPI Program and Plan) related to the development of the QAPI Plan; §483.75(a)(2) and,
  – F926 (Smoking Policies). §483.90(i)(5)

Moratorium

• Includes the following F-Tags:
  – F838 (Facility Assessment); §483.70(e)
    • §483.80(a) As linked to the facility assessment
  – F881 (Antibiotic Stewardship Program); §483.80(a)(3)
  – F865 (QAPI Program and Plan) related to the development of the QAPI Plan; §483.75(a)(2)
    • Initial QAPI Plan must be provided to State Agency Surveyor at annual survey
MEGA Rule Phase 3

- §483.75(g)(1) QAA committee (iv) addition of Infection Control and Prevention Officer

- §483.80 Infection control (b) Infection preventionist (IP)

- §483.80 Infection control (c) IP participation on QAA committee
Training

- Centers for Medicare and Medicaid Services (CMS) Reform of Requirements for Long-Term Care Facilities (Mega Rule): The IP must:
  1. Have primary professional training in nursing, medical technology, microbiology, epidemiology, or other related field;
  2. Be qualified by education, training, experience or certification;
  3. Work at least part-time at the facility; and
  4. Have completed specialized training in infection prevention and control

Training

- Illinois Nursing Home Care Act: “The Infection Prevention and Control Professionals shall be qualified through education, training, experience, or certification or a combination of such qualifications. The Infection Prevention and Control Professional's qualifications shall be documented and shall be made available for inspection by the Department.”

Additional Phase 2 Consideration

• §483.35 Nursing services
  – Specific usage of the Facility Assessment at § 483.70(e) in the determination of sufficient number and competencies for staff

Facility Assessment

• Not all facilities are the same.

• The facility assessment aims to formally document an assessment of the resident population and the resources needed to care for them.

• CMS expects facilities to:
  – Know their own capabilities and capacities
  – Ensure staff have the appropriate competencies
  – Use the assessment to determine staffing levels.
TO: Illinois Long Term Care Facilities and Assisted Living Facilities, Local Health Departments, Local Health Department Administrators, Illinois Department of Public Health Long Term Care Regional Contacts

FROM: Jennifer E. Layden, MD, PhD, Chief Medical Officer and State Epidemiologist Debra D. Bryars, MSN, RN, Deputy Director, Office of Health Care Regulation

RE: Guidelines for the Prevention and Control of Influenza Outbreaks in Illinois Long Term Care Facilities

DATE: September 24, 2018

The purpose of this memorandum is to provide long-term care facilities with current guidance for preventing and controlling influenza cases and outbreaks and with information on the reporting requirements in the event of a suspected or confirmed influenza outbreak.

Prevention and Control of Influenza

Influenza Vaccination

• “Each health care setting shall ensure that all health care employees are provided education on influenza and are offered the opportunity to receive seasonal, novel and pandemic influenza vaccine, in accordance with this section, during the influenza season (between September 1 and March 1 of each year) unless the vaccine is unavailable.”

• “A health care employee may decline the offer of vaccination if the vaccine is medically contraindicated, if the vaccine is against the employee’s religious beliefs, or if the employee has already been vaccinated. General philosophical or moral reluctance to influenza vaccinations does not provide a sufficient basis for an exemption”.

http://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=100-1029&GA=100
IDPH Outbreak Reporting Requirements

• Any pattern of cases or increased incidence of any illness beyond the expected number of cases in a given period that may indicate an outbreak shall be reported to the local health authority within 24 hours.

• All outbreaks of influenza must be reported to the local health department and the respective IDPH Long-term Care Regional Office within 24 hours.

Resources
Phone, Ping or Click a Friend

- Chicago Department of Public Health
  - CDPHHAIR@cityofchicago.org

- Illinois Department of Public Health
  - dph.dpsq@illinois.gov

- Cook County Department of Public Health
  - www.cookcountypublichealth.org

- DuPage County Health Department
  - www.dupagehealth.org/disease-control

- Telligen
  - www.telligenqinqio.com
Welcome to the State of Illinois Rapid Electronic Notification System (SIREN)

SIREN is a secure web-based persistent messaging and alerting system that leverages email, phone, text, pagers and other messaging formats to provide 24/7/365 notification, alerting, and flow of critical information. This system provides rapid communication, alerting and confirmation between state and local agencies, public and private partners, target disciplines and authorized individuals in support of state and local emergency preparedness and response.

Register

SIREN originally implemented as the core alerting service for the Department of Public Health’s Health Alert Network, has been broadened in scope and utility making it a robust tool for all state agencies and partners with alerting, notification and collaboration needs, and is available to all agencies and partners via Statewide Master Contract.

SIREN is used for targeted alerting based on members professional roles or functions. It is not intended for use as a public warning system at this time. During your registration you will need to enter contact information and select your specific organization and function. For assistance please contact us. For IDPH, all public health partners and other members, DPH.SIREN@illinois.gov; and for IEMA and emergency management partners, EMA.SIREN@illinois.gov, and provide a detailed message including information about where you work and your role or title.

https://www.siren.illinois.gov/
Patient Safety & Quality

Nearly 98,000 Americans die each year as a result of preventable medical errors. Over 1.5 billion dollars per year are paid, nationally, to cover the cost of medical errors which contributes to increases in across the board health care costs to consumers. The Division of Patient Safety and Quality is committed to work for safe, quality health care for the people of Illinois.

The Illinois Department of Public Health’s Division of Patient Safety and Quality promotes health care transparency and is responsible for developing and implementing programs to collect and report health care provider data for improving the quality and value of health care services delivered to Illinois residents. Through the implementation of the Hospital Report Card Act, the Consumer Guide, and the Adverse Event Reporting Act, the Division will make hospital and ambulatory surgical centers performance data available to the public.

The Division also evaluates how local and national patient safety and quality standards will improve patient safety and quality in Illinois. Links to other sites with information about national quality and safety standards for health care organizations are included in the Links section.

http://dph.illinois.gov/topics-services/prevention-wellness/patient-safety-quality
How to Find Local Help

http://www.idph.state.il.us/LHDMap/HealthRegions.aspx
<table>
<thead>
<tr>
<th>Local Health Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Search for</strong></td>
</tr>
<tr>
<td><strong>LHD Name/Year Established</strong></td>
</tr>
<tr>
<td>Chicago Department of Public Health 333 South State Street 2nd Floor Chicago, IL 60604 Established: 1834</td>
</tr>
<tr>
<td>Cook County Department of Public Health 15900 S. Cicero Avenue Building E 3rd Floor Oak Forest, IL 60452 Established: 1945</td>
</tr>
<tr>
<td>Evanston Department of Health and Human Services 2100 Ridge Avenue Evanston, IL 60201 Established: 1874</td>
</tr>
<tr>
<td>Oak Park Department of Public Health 1 Village Hall Plaza 123 Madison Street Oak Park, IL 60302 Established: 1949</td>
</tr>
<tr>
<td>Skokie County Health Department 5127 Oakton Street Skokie, IL 60077 Established: 1960</td>
</tr>
<tr>
<td>Stickney Township Public Health District 5635 State Road Burbank, IL 60459 Established: 1946</td>
</tr>
</tbody>
</table>

**Questions, Comments, or Updates?**
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Nursing Homes and Assisted Living (Long-term Care Facilities [LTCFs])

Nursing homes, skilled nursing facilities, and assisted living facilities, collectively known as long-term care facilities, LTCFs provide a variety of services, both medical and personal care, to people who are unable to manage independently in the community. Over 4 million Americans are admitted to or reside in nursing homes and skilled nursing facilities each year and nearly one million persons reside in assisted living facilities. Data about infections in LTCFs are limited, but it has been estimated in the medical literature that:

- 1 to 3 million serious infections occur every year in these facilities.
- Infections include urinary tract infection, diarrheal diseases, antibiotic-resistant staph infections and many others.
- Infections are a major cause of hospitalization and death; as many as 380,000 people die of the infections in LTCFs every year.

The Core Elements of Antibiotic Stewardship for Nursing Homes

The Department of Health and Human Services has developed a strategy to address infections in Long-term Care Facilities in Phase 3 of the National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination.

https://www.cdc.gov/longtermcare/index.html
The Core Elements of Antibiotic Stewardship for Nursing Homes

The Core Elements of Antibiotic Stewardship for Nursing Homes adapts the CDC Core Elements of Hospital Antibiotic Stewardship into practical ways to initiate or expand antibiotic stewardship activities in nursing homes. Nursing homes are encouraged to work in a step-wise fashion, implementing one or two activities to start and gradually adding new strategies from each element over time. Any action taken to improve antibiotic use is expected to reduce adverse events, prevent emergence of resistance, and lead to better outcomes for residents in this setting.

Core Elements of Antibiotic Stewardship for Nursing Homes

- Introduction
- Leadership Commitment
- Accountability
- Drug Expertise

https://www.cdc.gov/longtermcare/prevention/antibiotic-stewardship.html
Consumer alerts

**Norovirus**
1/8/2019
Norovirus is a serious gastrointestinal illness that causes inflammation of the stomach and/or intestines. This inflammation leads to nausea, vomiting, diarrhea, and abdominal pain. Norovirus is extremely contagious (easy to spread) from one person to another. Norovirus is not related to the flu (Influenza), even though it is sometimes called the stomach flu. Anyone can get norovirus, and they can have the illness multiple times during their lifetime.
Read this article

**What you need to know about adenovirus**
12/18/2018
Adenovirus infections have recently been in the news for causing outbreaks in infants and young adults from two states. Adenovirus infections are common in the late winter, spring, and early summer, overlapping with flu season. Though these viral respiratory infections may easily be mistaken for the flu, there are distinct differences to keep in mind.
Read this article

**How to prepare for an outpatient surgery procedure**
12/10/2018
Outpatient surgery (also known as ambulatory surgery) refers to procedures that do not require an overnight hospital stay. These procedures take place in ambulatory surgery centers (ASCs). ASCs are facilities that provide surgery, medical procedures, and diagnostic services outside of the hospital. Some commonly performed outpatient procedures include endoscopy/colonoscopy, hemodialysis, cataract surgery, ear/nose/throat procedures, gynecological procedures, gall bladder removal, kidney/bladder procedures, arthroscopic/orthopedic procedures, and hernia operations.
Read this article

https://apic.org/
Support for Alcohol Based Handrub

MEMORANDUM

TO: Long Term Care Facilities, Local Health Departments, Illinois Department of Public Health Regional Health Officers, Long Term Care Ombudsman

CC: Office of Health Care Regulation; Division of Infectious Diseases

FROM: Jennifer E. Layden, MD, PhD, Chief Medical Officer and State Epidemiologist
       Erica Runningdeer, MSN, MPH, RN, HAI Prevention Coordinator, Division of Patient Safety & Quality

DATE: February 5, 2019

SUBJECT: Use of Alcohol-Based Hand Rubs for Hand Hygiene in Long Term Care Facilities

The purposes of this memorandum are to:

- Remind facilities that alcohol-based hand rubs are the preferred method of hand hygiene when hands are not visibly soiled or contaminated with blood or bodily fluids; and
- Recommend that all long-term care facilities incorporate alcohol-based hand rub into hand hygiene

https://www.chicagohan.org/
Support for Alcohol Based Handrub

“The recommendation for making alcohol-based hand rub available in long-term care settings is in compliance with state and federal regulations. According to 77 Ill. Adm. Code 300.696 Infection Control, each long-term care facility shall adhere to CDC guidelines on hand hygiene. Further, the Centers for Medicare and Medicaid Services state that facilities may install alcohol-based hand rub dispensers if they are installed in a manner that adequately protects against inappropriate access.”

https://www.chicagohan.org/
Support for Alcohol Based Handrub

“Hand hygiene (HH) (e.g., hand washing and/or ABHR): consistent with accepted standards of practice such as the use of ABHR instead of soap and water in all clinical situations except when hands are visibly soiled (e.g., blood, body fluids), or after caring for a resident with known or suspected Clostridium (C.) difficile or norovirus infection during an outbreak, or if infection rates of C. difficile infection (CDI) are high; in these circumstances, soap and water should be used;”

Support for Alcohol Based Handrub

“NOTE: According to the CDC, strict adherence to glove use is the most effective means of preventing hand contamination with C. difficile spores as spores are not killed by ABHR and may be difficult to remove even with thorough hand washing.”

## K325 Alcohol Based Hand Rub Dispenser (ABHR)

ABHRs are protected in accordance with 8.7.3.1, unless all conditions are met:

- Corridor is at least 6 feet wide.
- Maximum individual dispenser capacity is 0.32 gallons (0.53 gallons in suites) of fluid and 18 ounces of Level 1 aerosols.
- Dispensers shall have a minimum of four foot horizontal spacing.
- Not more than an aggregate of 19 gallons of fluid or 1135 ounces of aerosol are used in a single smoke compartment outside a storage cabinet, excluding one individual dispenser per room.
- Storage in a single smoke compartment greater than 6 gallons complies with NFPA 30.
- Dispensers are not installed within 1 inch of an ignition source.
- Dispensers over carpeted floors are in sprinklered smoke compartments.
- ABHR does not exceed 95 percent alcohol.
- Operation of the dispenser shall comply with Section 18.3.2.6(11) or 15.3.2.6(11).
- ABHR is protected against inappropriate access.

18.3.2.6, 19.3.2.6, 42 CFR Parts 403, 418, 460, 462, 483, and 485

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Organisms of Concern

AKA - Organism Alphabet Soup
CDC Facts

• Antibiotic resistance has the potential to affect people at any stage of life, as well as the healthcare, veterinary, and agriculture industries, making it one of the world’s most urgent public health problems.

• Each year in the U.S., at least 2 million people are infected with antibiotic-resistant bacteria, and at least 23,000 people die as a result.

Source: https://www.cdc.gov/drugresistance/about.html
CDC Facts

• No one can completely avoid the risk of resistant infections, but some people are at greater risk than others (for example, people with chronic illnesses). If antibiotics lose their effectiveness, then we lose the ability to treat infections and control public health threats.

• Many medical advances are dependent on the ability to fight infections using antibiotics, including joint replacements, organ transplants, cancer therapy, and treatment of chronic diseases like diabetes, asthma, and rheumatoid arthritis.

Source: https://www.cdc.gov/drugresistance/about.html
Facilities work together to protect patients.

Common Approach *(Not enough)*
- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

Independent Efforts *(Still not enough)*
- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

Corrected Approach *(Needed)*
- Public health departments track and alert health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.

https://www.cdc.gov/vitalsigns/stop-spread/index.html
Facilities work together to protect patients.

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- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

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Coordinated Approach (Needed)
- Public health departments track and alert health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.

https://www.cdc.gov/vitalsigns/stop-spread/index.html
MEMORANDUM

To: Hospital Chief Executive Officer, Long Term Acute Care Hospital Executive Officer, Long Term Care Facility Executive Officer, Long Term Care Director of Nursing or Designate, Hospital-affiliated Clinical Laboratory Director, Independent or Free-standing Laboratory Director


From: Mary Driscoll, RN, MPH
Chief, Division of Patient Safety and Quality

Erica Abu-Ghallous, MSN, MPH, RN
HAI Prevention Coordinator, Division of Patient Safety and Quality

Date: September 4, 2013

Subject: XDRO registry

Carbapenem-resistant Enterobacteriaceae (CRE) are considered extensively drug resistant organisms (XDROs) that have few antibiotic treatment options and high mortality rates. CRE are increasingly detected among patients in Illinois, including acute and long-term care healthcare facilities.

In response to the CRE public health threat, the Illinois Department of Public Health (IDPH) has amended the Control of Communicable Diseases Code (77 Ill. Adm. Code 690) Rules (see addendum) to require reporting of CREs to IDPH.

All hospitals, hospital-affiliated clinical laboratories, independent or free-standing laboratories...
Extensively Drug Resistant Organism Registry

Reporting Rule
Starting November 1, 2013, the first CRE-positive culture per patient stay must be reported to the XDRO registry.

CRE definition
Enterobacteriaceae (e.g., E. coli, Klebsiella species, Enterobacter species, Proteus species, Citrobacter species, Serratia species, Morganella species, or Providentia species) with one of the following laboratory test results:
1. Molecular test (e.g., polymerase chain reaction [PCR]) specific for carbapenemase;
2. Phenotypic test (e.g., Modified Hodge) specific for carbapenemase production;
3. For E. coli and Klebsiella species only: non-susceptible (intermediate or resistant) to ONE of the following carbapenems (doripenem, meropenem, or imipenem) AND resistant to ALL of the following third generation cephalosporins tested (ceftriaxone, cefotaxime, and ceftazidime). Note: ignore ertapenem for this definition.

Consult with your microbiology laboratory regarding which CRE tests are available. For some laboratories, only #3 will be available.

https://www.xdro.org/reporting-rule.html
Initial Purpose of the XDRO Registry

• Improve CRE surveillance

• Improve inter-facility communication
Expanded Purpose of the XDRO Registry

- Improve CRE surveillance
- Establish *Candida auris* surveillance
- Establish carbapenemase-producing *Pseudomonas aeruginosa* surveillance
- Improve inter-facility communication
Knowledge is Key to Interrupting Transmission

- Routine query of the Registry for each admission
  - Can plan for resident placement ahead of time
  - Doesn’t rely on communication from the transferring facility
  - Allows for timely initiation of precautions
  - May result in fewer resident room changes

- Can assist if cohorting is necessary
  - Identifies the mechanisms of resistance
Who Should Have Access to the XDRO Registry?

- Admissions coordinators
- Director of nursing and/or assistant director of nursing
- Infection preventionist
- Others involved in the admission process
Unique clinical CRE cases reported to XDRO registry by month of first clinical culture, **Cook County and Illinois, 11/1/13 – 10/31/18 (N=4304)**

Note: Includes reports submitted through 1/21/19

Slide courtesy of Angela Tang.
Unique clinical and screening CRE cases reported to XDRO registry by month of first positive culture, Illinois, 11/1/13 – 10/31/18 (N=5517)

Note: Includes reports submitted through 1/21/19

Slide courtesy of Angela Tang.
Illinois *C. auris* cases (n=540) by culture date, as of 2/4/2019*

*Includes 32 colonized to clinical cases

Slide courtesy of Angela Tang.
U.S. Map: Clinical cases of *Candida auris* reported by U.S. states, as of December 31, 2018

Cases are categorized by the state where the specimen was collected. Most probable cases were identified when laboratories with current cases of *C. auris* reviewed past microbiology records for *C. auris*. Isolates were not available for confirmation. Early detection of *C. auris* is essential for containing its spread in healthcare facilities.

Candida auris in the U.S.

C. auris clinical cases reported by state — United States, 2013–November 2018

~520 clinical cases
~1420 clinical + screening cases

CDC, 2019
MEMORANDUM

TO: Local Health Departments, Infectious Disease Physicians, Hospital Emergency Departments, Infection Control Preventionists, Health Care Providers, Long Term Care Facilities, and Laboratories

FROM: Division of Patient Safety and Quality and Communicable Disease Control Section

DATE: January 24, 2018

SUBJECT: Increase in the number of *Candida auris* cases in the Chicago-metropolitan region
Public Health Response

To: Acute Care Hospitals, Long Term Acute Care Hospitals, Long Term Care Facilities, Local Health Departments, Illinois Department of Public Health Regional Health Officers

From: Division of Patient Safety and Quality

Date: January 25, 2019

Re: Recommendations for the Implementation of Empiric Contact Precautions for *Candida Auris* (*C. auris*) and Updated CDC *C. auris* Disinfection Guidance

As noted in the Illinois Department of Public Health (IDPH) Health Alert released in September 2018, health care facilities, especially acute care hospitals, should consider the following for patients with a tracheostomy or on mechanical ventilation admitted from any skilled nursing facility or long-term acute care hospital regardless of known *Candida auris* (*C. auris*) infection or colonization.

http://dph.illinois.gov/sites/default/files/01.25.19 OPPS%20isolation%20clarification%20C.Auris_0.pdf
Registry Expanded to Include *Pseudomonas Aeruginosa*

Patients with VIM-producing Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA) reported to the Centers for Disease Control and Prevention (CDC) as of December 2017, by state.

Patients with IMP-producing Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA) reported to the Centers for Disease Control and Prevention (CDC) as of December 2017, by state.

Patients with KPC-producing Carbapenem resistant *Pseudomonas aeruginosa* (CRPA) reported to the Centers for Disease Control and Prevention (CDC) as of December 2017, by state.

[https://www.cdc.gov/hai/organisms/pseudomonas/tracking.html](https://www.cdc.gov/hai/organisms/pseudomonas/tracking.html)
Carbapenemase-Producing Organisms reported to the XDRO registry by known mechanism, Illinois, 11/1/2013 – 10/31/18

Notes: Includes reports submitted through 1/21/19; clinical and screening specimens; CRE, CRPA, and unknown organism

Slide courtesy of Angela Tang.
Legionella

• Nearly a fourfold increase from 2000-2014.

• Deadly in about 10%.

• An effective water management plan would prevent 90% of the outbreaks investigated.

https://www.cdc.gov/vitalsigns/legionnaires/index.html

Legionella can grow and spread in many areas of a building.

Effective water management programs can REDUCE the risk of Legionnaires’ disease.

Legionella can make people sick when the germs grow in water and spread in droplets small enough for people to breathe in. Legionella grows best in warm water that is not moving or that does not have enough disinfectant to kill germs.

- **Cooling Tower**: When disinfectant levels are low, cooling tower fans can spray contaminated water droplets.
- **Shower**: Legionella can grow in and spread through showerheads if a building’s water has low disinfectant levels.
- **Hot Tub**: If hot tubs are not well maintained, the warm temperature supports growth of Legionella, which can spread through water jets.
- **Decorative Fountain**: Legionella can grow in warm areas of a fountain and splashing can spread this contaminated water.
- **Unoccupied Floor**: Low occupancy decreases water flow and disinfectant levels, increasing risk of Legionella growth.
- **Municipal Water Supply**: Events that interrupt the delivery of municipal water to a building, such as nearby construction, allow dirt to enter the system and use up disinfectant.

[https://www.cdc.gov/vitalsigns/legionnaires/index.html](https://www.cdc.gov/vitalsigns/legionnaires/index.html)
Legionella

- Routinely flush all water sources.
- Reconsider decorative water features.
  - Facilities Guidelines Institute
    - Human contact limited and/or disinfection system
    - Components resistant to chemicals
    - Minimize droplet production
    - Exhaust ventilation directly above

DATE: June 02, 2017
TO: State Survey Agency Directors
FROM: Director
Survey and Certification Group
SUBJECT: Requirement to Reduce Legionella Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires’ Disease (LD)

Memorandum Summary

- **Legionella Infections**: The bacterium *Legionella* can cause a serious type of pneumonia called LD in persons at risk. Those at risk include persons who are at least 50 years old, smokers, or those with underlying medical conditions such as chronic lung disease or immunosuppression. Outbreaks have been linked to poorly maintained water systems in buildings with large or complex water systems including hospitals and long-term care facilities. Transmission can occur via aerosols from devices such as showerheads, cooling towers, hot tubs, and decorative fountains.

- **Facility Requirements to Prevent Legionella Infections**: Facilities must develop and adhere to policies and procedures that inhibit microbial growth in building water systems that reduce the risk of growth and spread of *legionella* and other opportunistic pathogens in water.

  - This policy memorandum applies to Hospitals, Critical Access Hospitals (CAHs) and Long-Term Care (LTC). However, this policy memorandum is also intended to provide general awareness for all healthcare organizations.

Background

LD, a severe sometimes fatal pneumonia, can occur in persons who inhale aerosolized droplets of water contaminated with the bacterium *Legionella*. In a recent review of LD outbreaks in the
Legionella

- 42 CFR §483.80 for skilled nursing facilities and nursing facilities:
  “The facility must establish and maintain an infection prevention and control program designed to provide a safe, sanitary, and comfortable environment and to help prevent the development and transmission of communicable diseases and infections.”

Water Management Policies and Procedures

• Conduct a facility risk assessment to identify where *Legionella* and other opportunistic waterborne pathogens (e.g. *Pseudomonas*, *Acinetobacter*, *Burkholderia*, *Stenotrophomonas*, nontuberculous mycobacteria, and fungi) could grow and spread in the facility water system.

• Implement a water management program that considers the ASHRAE industry standard and the CDC toolkit, and includes control measures such as physical controls, temperature management, disinfectant level control, visual inspections, and environmental testing for pathogens.

• Specify testing protocols and acceptable ranges for control measures, and document the results of testing and corrective actions taken when control limits are not maintained.

CDC Legionella Resources

https://www.cdc.gov/legionella/wmp/toolkit/index.html
Building Questions 1-4

1. Is your building a healthcare facility where patients stay overnight or does your building house or treat people who have chronic and acute medical problems or weakened immune systems?
   - Yes
   - No

2. Does your building primarily house people older than 65 years (like a retirement home or assisted-living facility)?
   - Yes
   - No

3. Does your building have multiple housing units and a centralized hot water system (like a hotel or high-rise apartment complex)?
   - Yes
   - No

4. Does your building have more than 10 stories (including basement levels)?
   - Yes
   - No

Device Questions 5-8

5. Does your building have a cooling tower?
   - Yes
   - No

6. Does your building have a hot tub (also known as a spa) that is not drained between each use?
   - Yes
   - No

7. Does your building have a decorative fountain?
   - Yes
   - No

8. Does your building have a centrally-installed mister, atomizer, air washer, or humidifier?
   - Yes
   - No

You need a water management program for your building's:
- hot and cold water distribution system
- decorative fountain
- centrally-installed mister, atomizer, air washer, or humidifier

On properties with multiple buildings, prioritize buildings that house or treat people who are at increased risk for Legionnaires' disease.

Summary

• Knowledge is power.

• Speak up with the facts.

• Some things are not negotiable.

• Bag bugs are all around us.

• Network, network, network.
Discussion and Questions

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