Long Term Care ASIC Call
March 10, 2020

Tennessee Department of Health
Healthcare Associated Infections and Antimicrobial Resistance Program

Welcome

Adobe Connect Housekeeping

- **All lines have been muted**
- **Press *6 to unmute your line to ask a question or use the chat box to ask questions/comment**

Agenda

- **New Community Acquired Pneumonia guidelines**
  - **Connor Deri, PharmD**
- **Update on novel coronavirus**
  - **Fabiola DeMuth, MSN, RN, CIC, CMIP, IPCO**
- **Announcements**

Community Acquired Pneumonia Update

2019 CAP Guideline Updates

Connor Deri, PharmD
PGY-2 Infectious Diseases Pharmacy Resident
Vanderbilt University Medical Center

Objectives

- Review pertinent definitions and categorizations of pneumonia
- Discuss relevant changes between the 2007 and 2019 community-acquired pneumonia guidelines
- Apply the updated guidelines to a patient case

Definitions

- **Community-acquired pneumonia (CAP)**
  - Presence of clinical features with supporting radiographic evidence of pneumonia occurring outside the hospital
- Hospital-acquired pneumonia (HAP)
  - Pneumonia ≥ 48 hours after admission
- Ventilator-associated pneumonia (VAP)
  - Pneumonia > 48 hours after intubation

Kalil AC et al. *Clin Infect Dis*. 2016;63(5):e61-e111.
Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

SUPPLEMENT ARTICLE

Infectious Diseases Society of America/American Thoracic Society Consensus Guidelines on the Management of Community-Acquired Pneumonia in Adults

Clinical Infectious Diseases 2007; 44:S27–72
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1058-4838/2007/4405S2-0001$15.00
DOI: 10.1086/511159

Mandall LA et al. *Clin Infect Dis.* 2007;44(2):S27-S72.
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AMERICAN THORACIC SOCIETY DOCUMENTS

Diagnosis and Treatment of Adults with Community-acquired Pneumonia

An Official Clinical Practice Guideline of the American Thoracic Society and Infectious Diseases Society of America

Joshua P. Metlay*, Grant W. Waterer*, Ann C. Long, Antonio Anzueto, Jan Brozek, Kristina Crothers, Laura A. Cooley, Nathan C. Dean, Michael J. Fine, Scott A. Flanders, Marie R. Griffin, Mark L. Metersky, Daniel M. Musher, Marcos I. Restrepo, and Cynthia G. Whitney; on behalf of the American Thoracic Society and Infectious Diseases Society of America

THIS OFFICIAL CLINICAL PRACTICE GUIDELINE WAS APPROVED BY THE AMERICAN THORACIC SOCIETY MAY 2019 AND THE INFECTIOUS DISEASES SOCIETY OF AMERICA AUGUST 2019

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Severe CAP

Requires either 1 major criterion or ≥ 3 minor criteria

Major criteria

- Septic shock with need for vasopressors
- Respiratory failure requiring mechanical ventilation

Minor criteria

- Respiratory rate ⩾ 30 breaths/min
- Pa_{O2}/F_{IO2} ratio ⩽ 250
- Multilobar infiltrates
- Confusion/disorientation
- Uremia (blood urea nitrogen level ⩾ 20 mg/dl)
- Leukopenia* (white blood cell count < 4,000 cells/μl)
- Thrombocytopenia (platelet count < 100,000/μl)
- Hypothermia (core temperature < 36°C)
- Hypotension requiring aggressive fluid resuscitation

Mandall LA et al. *Clin Infect Dis.* 2007;44(2):S27-S72.
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DIAGNOSTIC TESTING

Cultures, urinary antigen testing, & procalcitonin

Sputum and Blood Cultures

2007 ATS/IDSA Guideline	2019 ATS/IDSA Guideline
Primarily recommended in patients with severe disease	Recommended in patients with severe disease as well as in all inpatients empirically treated for **MRSA or *Pseudomonas aeruginosa***

MRSA = methicillin-resistant *Staphylococcus aureus*

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Urinary Antigen Testing

2007 ATS/IDSA Guideline	2019 ATS/IDSA Guideline
Primarily recommended in patients with one of the following: • Severe CAP • Failure of outpatient antibiotics • Active alcohol abuse • Recent travel (within past 2 weeks) • Presence of a pleural effusion	Not routinely recommended in adults with CAP except: • Severe CAP • Epidemiological factors (e.g. Legionella outbreak or recent travel)

*Includes pneumococcal and *Legionella* antigen tests

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Other Diagnostic Testing

2007 ATS/IDSA Guideline	2019 ATS/IDSA Guideline
Procalcitonin	
Not covered	Empiric antibiotics should be initiated in patients with suspected CAP **regardless of initial serum procalcitonin levels**
Influenza Virus Testing	
Rapid diagnostic tests may be indicated when the diagnosis is uncertain	Recommend testing for influenza with a rapid influenza molecular assay **(e.g. influenza NAAT)** over a rapid antigen test

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

CAP TREATMENT STRATEGIES

Outpatient, nonsevere and severe inpatient pneumonia

Outpatient CAP Treatment

Table 3. Initial Treatment Strategies for Outpatients with Community-acquired Pneumonia

	Standard Regimen
No comorbidities or risk factors for MRSA or *Pseudomonas aeruginosa**	Amoxicillin or doxycycline or macrolide (if local pneumococcal resistance is <25%)†
With comorbidities‡	Combination therapy with amoxicillin/clavulanate or cephalosporin AND macrolide or doxycycline§ OR monotherapy with respiratory fluoroquinolone‖

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Outpatient CAP Treatment

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High dose amoxicillin

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Inpatient CAP Treatment

	Standard Regimen
Nonsevere inpatient pneumonia	*B*-lactam plus macrolide **OR** respiratory fluoroquinolone
Severe inpatient pneumonia	*B*-lactam plus macrolide **OR** *B*-lactam plus a respiratory fluoroquinolone

B-lactams: ampicillin-sulbactam, cefotaxime, ceftriaxone, or ceftaroline
Macrolides: azithromycin or clarithromycin
Respiratory fluoroquinolones: levofloxacin or moxifloxacin

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

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MRSA and *P. aeruginosa* Risk Factors

- Prior pathogen isolation (especially from the respiratory tract)
- Recent hospitalization **AND** use of parental antibiotics within the last 90 days
- Locally validated risk factors

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Treatment Strategies for Drug-Resistant CAP

	Prior Respiratory Isolation of MRSA or *P. aeruginosa*	Recent Hospitalization and Use of Parental Antibiotics within 90 days
Nonsevere inpatient pneumonia	Add MRSA or *P. aeruginosa* coverage and obtain cultures	Obtain cultures but **WITHHOLD** empiric MRSA or *P. aeruginosa* coverage
Severe inpatient pneumonia	Add MRSA or *P. aeruginosa* coverage and obtain cultures	Add MRSA or *P. aeruginosa* coverage and obtain cultures

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Influenza-positive CAP

- "**We recommend** that antiinfluenza treatment be prescribed for adults with CAP who test positive for influenza in the *inpatient* setting, independent of duration of illness before diagnosis"
  - Strong recommendation, moderate quality of evidence

- "**We suggest** that antiinfluenza treatment be prescribed for adults with CAP who test positive for influenza in the *outpatient* setting, independent of duration of illness before diagnosis"
  - Conditional recommendation, low quality of evidence

- "**We recommend** that standard antibacterial treatment be initially prescribed for adults with clinical and radiographic evidence of CAP who test positive for influenza in the inpatient and outpatient settings"
  - Strong recommendation, low quality of evidence

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Duration of Therapy

- Guided based on clinical stability and resolution of the following:
  - Vital sign abnormality (e.g. tachycardia, tachypnea, hypotension)
  - Ability to eat
  - Normal mentation

- Continue antibiotic therapy for **no less than 5 days** and until the patient achieves stability

Metlay JP et al. *Am J Respir Crit Care Med.* 2019;200(7):e45-e67.

Take-Home Points

- Healthcare-associated pneumonia (HCAP) should be abandoned as a categorization of pneumonia
- It is important to distinguish between nonsevere and severe CAP
- Evaluate patient-specific factors to determine the need for MRSA or *P. aeruginosa* coverage

COVID-19 Guidance

Objectives

- **Basics of COVID-19**
- **Infection Prevention and control**
- **Facility Preparedness and Response**
- **Questions**

COVID-19

- **Person to person spread**
- **Potential spread from contact with infected surfaces or objects***
- **Incubation period : 2 -14 days (median ~ 5 days)**
- **Extent of asymptomatic spread not yet confirmed**
- **Airborne transmission is not believed to be the dominant mode of transmission**
- **Symptoms:**
  - **Fever**
  - **Cough**
  - **Shortness of Breath**

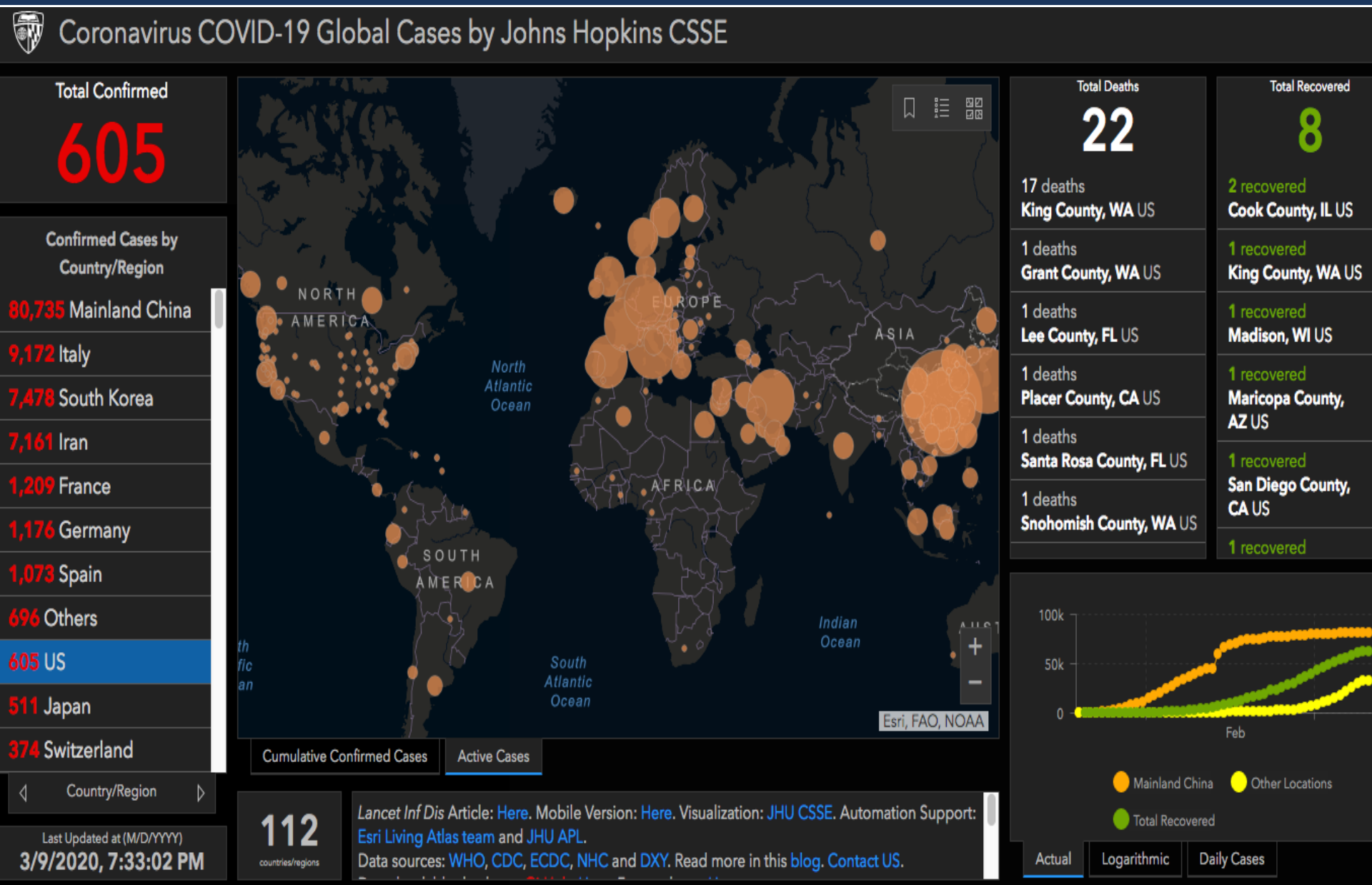
*Not believed to be the predominate method of transmission

Number of cases as of 03/9/20

- **World cases**
  - **113, 585 confirmed**
  - **62, 513 recovered**
  - **3,996 deaths**
- **US cases**
  - **605 confirmed**
  - **8 recovered**
  - **22 deaths**
- **TN cases**
  - **4 confirmed**

https://systems.jhu.edu/research/public-health/ncov/
https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

John Hopkins Dashboard



Facility Preparedness

- **CDC's strategies to prevent the spread of Coronavirus in LTC:**
  https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html
- **CMS's Infection Control and Prevention guidelines of COVID-19 in nursing homes: https://www.cms.gov/medicareprovider-enrollment-and-certificationsurveycertificationgeninfopolicy-and/guidance-infection-control-and-prevention-coronavirus-disease-2019-covid-19-nursing-homes**
- **TDH COVID19 Website: https://www.tn.gov/health/cedep/ncov**
- **COVID-19 Public Information line 877-857-2945**
  10 a.m. – 10 p.m. CST Daily
- **TDH Clinical questions (resident specific): 615-741-7247**
  24/7
- **Join email list serve for weekly updates**
  - **Email Valerie.nagoshiner@tn.gov to be added**

Individuals at higher risk for exposure include

- **Communities in the US with ongoing spread of the virus**
- **Healthcare workers caring for patients with COVID-19**
- **Close contacts of confirmed COVID-19 cases**
- **Travelers returning from affected international locations where community spread is occurring**

  China, Iran, Italy, South Korea, Japan
- **Severe PNA/ARDS without other known cause**

https://www.cdc.gov/coronavirus/2019-nCoV/summary.html#risk-assessment

Laboratory Testing

- **For testing at the State lab public health staff will determine if the patient meets the criteria for a person under investigation (PUI) for COVID-19**

- **Testing is now commercially available by LabCorp and Quest Diagnostics**
  COVID-19 immediately reportable disease

- **CDC recommends collecting and testing:**

  - **Upper respiratory specimens: Nasopharyngeal AND oropharyngeal swabs**

  - **Lower respiratory specimen (if possible): For residents with productive coughs***

*induction of sputum and open suction should be avoided as this could aerosolize the virus
https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html

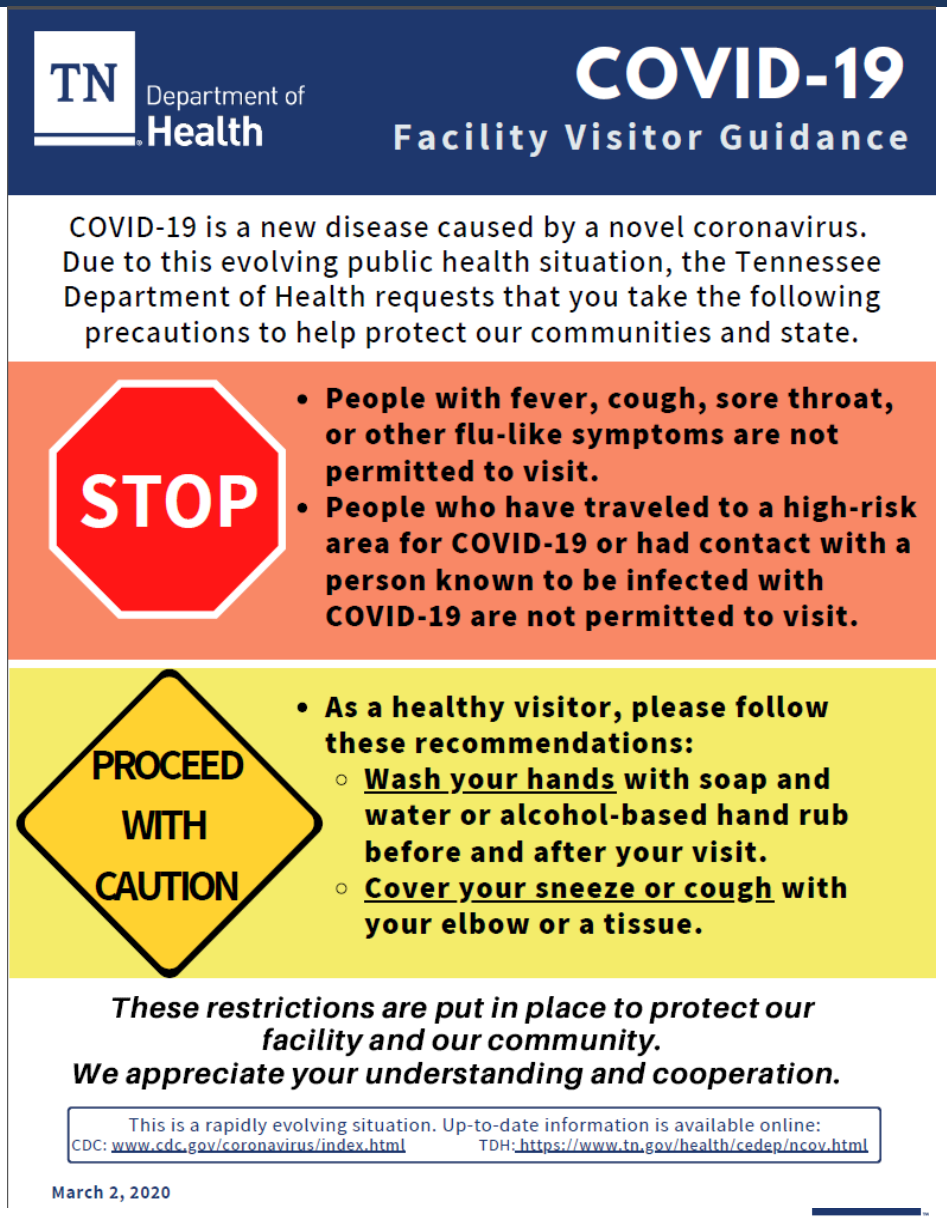
Strategies to Prevent the Spread of COVID-19 in Long-Term Care Facilities

- **Prevent:**
  - **introduction into facility**
  - **spread within facility**
  - **spread between facilities**

https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html

Prevent introduction into facility

- **Post signs at the entrance instructing visitors not to visit if they have symptoms of respiratory infection**
  - **Keep log of visitors and screen them for symptoms**
- **Ensure sick leave policies allow employees to stay home if they have symptoms of respiratory infection**
- **Upon admission implement <u>appropriate infection prevention practices for symptomatic residents</u>**



Assessment of residents with acute respiratory illness

- **Any patient with respiratory symptoms should be provided a mask to prevent spread**

- **The initial triage, clinical assessment, and testing of patients with acute respiratory disease (including suspected COVID-19) can be completed safely in any healthcare setting**

- **Appropriate precautions include:**
  - **PPE: standard, contact, and droplet precautions with use of eye protection or a face shield**
  - **Patient placement: private room with the door closed**
  - **If possible: avoid rooms where air exhaust is recirculated to other rooms**

Prevent the spread of respiratory germs WITHIN your facility

- **Keep residents and employees informed**
- **Monitor residents and employees for fever or respiratory symptoms**
- **Support hand and respiratory hygiene, as well as cough etiquette by residents, visitors, and employees**
- **Identify dedicated employees to care for COVID-19 patients and provide infection control training**
- **Provide the right supplies to ensure easy and correct use of PPE**

COVID-19 and the environment

- **Use EPA-registered products approved for health care use**
- **List of EPA-registered antimicrobial pesticides/disinfectants that would be appropriate for COVID-19:**
  https://www.americanchemistry.com/Novel-Coronavirus-Fighting-Products-List.pdf
- **Dedicate equipment, if possible**
- **Non-dedicated and non-disposable equipment should be cleaned and disinfected after every use according to manufacturer's instructions and facility policies**
- **Ensure environmental routine cleaning and disinfection procedures are followed consistently and correctly**

CMS Guidance

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/Quality, Safety & Oversight Group

Ref: QSO-20-14-NH

DATE: **March 4, 2020**

TO: State Survey Agency Directors

FROM: Director
Quality, Safety & Oversight Group

SUBJECT: Guidance for Infection Control and Prevention of Coronavirus Disease 2019 (COVID-19) in nursing homes

Memorandum Summary

- ***CMS is committed*** to taking critical steps to ensure America's health care facilities and clinical laboratories are prepared to respond to the threat of the COVID-19.
- **Guidance for Infection Control and Prevention of COVID-19** - CMS is providing additional guidance to nursing homes to help them improve their infection control and prevention practices to prevent the transmission of COVID-19.
- **Coordination with the Centers for Disease Control (CDC) and local public health departments** - We encourage all nursing homes to monitor the CDC website for information and resources and contact their local health department when needed (CDC Resources for Health Care Facilities: https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/index.html).

Transferring residents with COVID-19

- **Symptoms can vary in severity**
  - **Mild symptoms may not require transfer to a hospital as long as the facility can follow infection prevention and control practices recommended by CDC**
  - **Facilities without an AIIR are not required to transfer the patient assuming:**
    - **Patient does not require a higher level of care**
    - **Facility can adhere to the rest of the infection prevention and control practices recommended for caring for a resident with COVID-19**
  - **Severe symptoms that require transfer to a higher level of care, require clean and concise communication**
    - **EMS and receiving facility should be notified to the resident's diagnosis, precautions should be taken including facemask on the resident during transfer**

Accepting residents with COVID-19

- **Nursing homes should admit any individuals that they would normally admit to their facility, including individuals from hospitals where a case of COVID-19 was/is present**

- **A nursing home can accept a patient diagnosed with COVID-19 and still under Transmission based Precautions for COVID-19 as long as it can follow CDC guidance for transmission-based precautions**

- **If a nursing home cannot, it must wait until these precautions are discontinued**

- **CDC states that decisions to discontinue Transmission-based Precautions in hospitals will be made on a case-by-case basis in consultation with clinicians, infection prevention and control specialists, and public health officials**

CMS's Infection Control and Prevention guidelines of COVID-19 in nursing homes: https://www.cms.gov/medicareprovider-enrollment-and-certificationsurveycertificationgeninfopolicy-and/guidance-infection-control-and-prevention-coronavirus-disease-2019-covid-19-nursing-homes

HCP with potential exposure to COVID-19

- **Health care providers (HCP) who have signs and symptoms of a respiratory infection should not report to work**
- **Any staff that develop signs of a respiratory infection while on the job should:**
  - **Immediately stop work, put on a facemask**
  - **Inform the facility IP, and include information on individuals, equipment, and locations the person came in contact with;**
  - **Contact and follow the health department recommendations for next steps**
- **Work restrictions depend on the exposure type, PPE used, and patient factors**
- **Refer to the CDC guidance for exposures that might warrant restricting healthcare personnel from reporting to work (https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html#b)**

Additional resources

- **Infection preventionist training:**
  - https://www.cdc.gov/longtermcare/index.html
- **CDC Resources for Health Care Facilities:**
  - https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/index.html
- **CDC Updates:**
  - https://www.cdc.gov/coronavirus/2019-ncov/whats-new-all.html
- **CDC FAQ for COVID-19:**
  - https://www.cdc.gov/coronavirus/2019-ncov/infection-control/infection-prevention-control-faq.html
- **LTCF – Infection control self-assessment worksheet:**
  - https://qsep.cms.gov/data/252/A._NursingHome_InfectionControl_Worksheet11-8-19508.pdf
- **Infection control toolkit for bedside licensed nurses and nurse aides:**
  - https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/LTC-CMP-Reinvestment
- **Infection control and Prevention regulations and guidance: 42 CFR 438.80, Appendix PP of the State Operations Manual. See F-tag 880:**
  - https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf

Questions ?

Announcements

Next Steps

- **Next Call**
  - **April 7, 2020 at 1 pm Eastern Time/ 12 pm Central time**

- **Opportunities for Involvement**
  - **Speaker or Topic for future call**
  - **NHSN Reporting**
  - **TDH Antibiotic Use Point Prevalence Survey**

- **Feedback always appreciated**
  - **HAI.Health@tn.gov**
  - **Cullen.Adre@tn.gov**
  - **Vicky.Reed@tn.gov**