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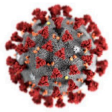

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Webinar Series
COVID-19: CALTCM Weekly Rounds

April 6, 2020

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Webinar Faculty & Moderator

Michael Wasserman, MD, CMD
Geriatrician, President, CALTCM,
Medical Director, Eisenberg Village,
Los Angeles Jewish Home

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Webinar Faculty

Allison McGeer, M.D., FRCPC
Microbiologist, Infectious Disease Physician
Sinai Health System in Toronto

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Webinar Faculty

Deborah Milito Pharm D, BCGP, FASCP
Director of Clinical and Consultant Services LTC Division/Chief Antimicrobial Stewardship Officer Diamond Pharmacy Services; Chair ASCP Antimicrobial and Infection Prevention and Control Committee; Member ASCP COVID-19 Task Force

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Webinar Faculty

Jay Luxenberg, MD
Chief Medical Officer, On Lok
CALTCM, Wave Editor-in-Chief

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Webinar Faculty

Dolly Greene RN, BSN©, CIC
Infection Prevention & Control Resources
Expert Stewardship

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Objectives

- What is new with COVID-19 this week?;
- Review NEJM article;
- Discuss asymptomatic and pre-symptomatic viral shedding;
- Latest update on masks;
- Update on pharmacology and deprescribing.

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What is new with COVID19 this week?
Long term care outbreaks
Asymptomatic infection
Masks

Allison McGeer, MSc, MD, FRCPC, FSHEA
Sinai Health System
University of Toronto, Ontario, Canada

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The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Epidemiology of Covid-19 in a Long-Term Care Facility in King County, Washington

Temet M. McMichael, Ph.D., Dustin W. Currie, Ph.D., Shauna Clark, R.N., Sargis Pogosjans, M.P.H., Meagan Kay, D.V.M., Noah G. Schwartz, M.D., James Lewis, M.D., Atar Baer, Ph.D., Vance Kawakami, D.V.M., Margaret D. Lukoff, M.D., Jessica Ferro, M.P.H., Claire Brostrom-Smith, M.S.N., Thomas D. Rea, M.D., Michael R. Sayre, M.D., Francis X. Riedo, M.D., Denny Russell, B.S., Brian Hiatt, B.S., Patricia Montgomery, M.P.H., Agam K. Rao, M.D., Eric J. Chow, M.D., Farrell Tobolowsky, D.O., Michael J. Hughes, M.P.H., Ana C. Bardossy, M.D., Lisa P. Oakley, Ph.D., Jesica R. Jacobs, Ph.D., Nimalie D. Stone, M.D., Sujan C. Reddy, M.D., John A. Jernigan, M.D., Margaret A. Honein, Ph.D., Thomas A. Clark, M.D., and Jeffrey S. Duchin, M.D., for the Public Health–Seattle and King County, EvergreenHealth, and CDC COVID-19 Investigation Team*

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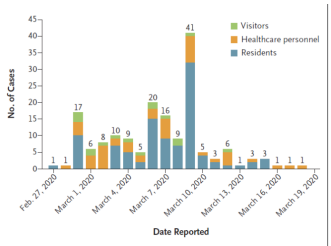

Figure 1. Confirmed Cases of Covid-19 Linked to Facility A.
Shown are cases of Covid-19 in Washington that had been epidemiologically linked to Facility A as of March 18, 2020.

- 101/118 residents infected (86%)
  - 7 with no recorded symptoms
  - 55 (55%) hospitalized
  - 34 (34%) deaths by March 18
- 50 staff infected
  - 3 hospitalized, all survived
- 16 visitors
  - 8 (50%) hospitalized
  - 1 (6%) died by March 18

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Take home messages

- Introductions into the facility by pre-/pauci-/a- symptomatic staff and visitors are a significant problem
- Social (physical) distancing is important everywhere, including inside long term care facilities
  - Intensive screening for entry – anyone with ANY symptoms, anyone with exposure to a COVID19 case
  - Anything that you can do may reduce the risk
    - Smaller groups, less mixing (staff AND residents)
    - Move staff lunch rooms, locker rooms
    - Fewer visitors
    - Masking for staff when at work
    - No inter-facility transfers, programs to reduce emergency department visits

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Definitions

- Viral shedding may occur when a person is:
  - Asymptomatic: no respiratory tract or systemtic symptoms
  - Pauci-symptomatic: minor symptoms (how is this defined)?
  - Pre-symptomatic: before the onset of symptoms

BUT

- Viral shedding does not equal infectiousness

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What proportion of infections due to SARS-CoV-2 are asymptomatic

- Mizumoto, Diamond Princess Outbreak: 18% (sensitivity up to 40%)
- Moriarity, Diamond Princess Outbreak: 50% of those tested
- Nishiura, Japanese evacuees from Wuhan: 33% (8-58%)
- Chinese National Health Commission screening: 130/166 (78%)

What proportion of transmission is from people without symptoms?

- Tapiwa: 48% (32-67%) in Singapore; 62% (50-76% in China

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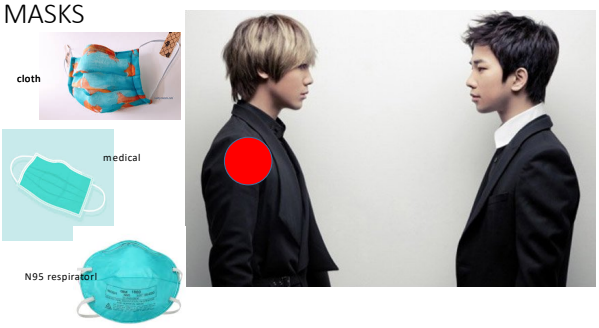
MASKS



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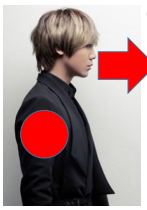
Masks worn by people shedding virus (who may be symptomatic or asymptomatic)



Cloth masks - ? Maybe

Medical masks – significantly reduce shedding

N95 respirators – significantly reduce shedding

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Masks worn by people shedding virus (who may be symptomatic or asymptomatic)

Cloth masks - ?likely no effect

Medical masks – protect from "larger particles"

N95 respirators – also protect from very small particles

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Preparing for the next wave by going back to what we know….

Presented by:
Deborah Milito, Pharm D, BCGP, FASCP
Director of Clinical and Consultant Services – Skilled Division
Chief Antimicrobial Stewardship Officer
Diamond Pharmacy Services
Chairman, American Society of Consultant Pharmacists (ASCP)
Antimicrobial Stewardship Committee

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CMS Mega Rule - Phase 2

Effective Date: November 28, 2017

Infection Prevention & Control Program (IPCP)

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IPCP

- F441; 483.80 Infection Control
- Each facility must establish and maintain an Infection Prevention and Control Program (IPCP)
- Intent:
  - To provide a safe, sanitary, and comfortable environment
  - To help prevent the development and transmission of communicable diseases and infections
  - Develop an Antimicrobial Stewardship Program (ASP)
  - Develop polices & procedures that include: surveillance, reportable infections, precautions, isolation, hand hygiene, linen storage

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Components of an IPCP

- Polices & Procedures
- Program oversight
- Infection Preventionist (IP)
- Surveillance
- Education
- Antimicrobial Review

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Transmission Based Precautions

- Used in addition to Standard Precautions when the standard precautions are not enough
- **Contact Precautions:** gloving, gowning, when in contact with patient or objects and surfaces in the resident's environment; private room preferred, cohorting acceptable
  - Reusable items cleaned and disinfected
  - Soap and water hand washing – no hand sanitizer
  - *C.difficile*
- **Droplet Precautions:** mask when within 3 feet of a resident infected with a disease spread by droplets (influenza, pertussis, meningococcal disease, private room preferred cohorting acceptable)
- **Airborne Precautions:** used when diseases are spread by fine particles spread by air current (Varicella Zoster, Tuberculosis, measles), includes use of a test-fitted N-95 respirator, eye protection, private room required
- **Coronavirus (CoVID-19)?! (SARS-CoV-2)** – respiratory droplets – yes airborne transmission over long distance- unlikely "Corona doesn't have wings"

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Certain pathogens may contaminate and survive on equipment and environmental surfaces for log periods of time. Examples include, but are not limited to:

- *C.difficile spores* can live on inanimate surfaces for up to 5 months;[55]
- The hepatitis B virus can last up to a week on inanimate surfaces; and
- The influenza virus can survive on fomites (e.g., any inanimate object or substance capable of carrying infectious organisms and transferring them from one individual to another) for up to 8 hours.[57]
- CoVID -19? Copper 4 hours, cardboard up to 24 hours, plastic and steel up to 72 hours

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CMS Mega Rule - Phase 2
Effective Date: November 28, 2017

Antimicrobial Stewardship Program (ASP)

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What can I do as a leader to improve antimicrobial use?

- Share formal statements in support of improving use with staff, residents and families.
- Commit resources for monitoring antibiotic use and providing feedback to staff.
- Identify and empower the medical director, director of nursing, the infection preventionist and/or consultant pharmacist to lead stewardship activities

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A Robust Immunization Program is Necessary

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Pharmacists as Immunizers

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CMS Mega Rule - Phase 3
Effective Date: November 28, 2019

Infection Preventionist (IP)

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Infection Preventionist (IP)

- Leader of the IPCP
- Qualified by education, training, experience, certification
- A member of the facility's quality assurance and performance improvement (QAPI) committee
- Report infection data, analyze information, implement and monitor the plan

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The CDC Core Elements

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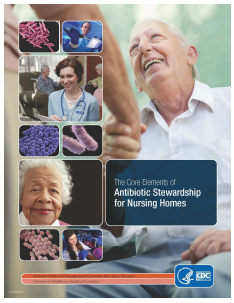

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Summary of Core Elements for Antibiotic Stewardship in Nursing Homes

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

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Summary of Core Elements for Antibiotic Stewardship in Nursing Homes

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

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Checklist for Core Elements of Antibiotic Stewardship in Nursing Homes

- The following checklist is a companion to the Core Elements of Antibiotic Stewardship in Nursing Homes. The CDC recommends that all nursing homes take steps to implement antibiotic stewardship activities. Before getting started, use this checklist as a baseline assessment of policies and procedures that are in place. Then use the checklist to review progress in expanding stewardship activities on a regular basis (e.g., annually). Over time, implement activities for each element in a step-wise fashion.

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Checklist for Core Elements of Antibiotic Stewardship in Nursing Homes (continued)...

LEADERSHIP SUPPORT	ESTABLISHED AT FACILITY
1. Can your facility demonstrate leadership support for antibiotic stewardship through one or more of the following actions?	❑ Yes ❑ No
If yes, indicate which of the following are in place (select all that apply) ❑ Written statement of leadership support to improve antibiotic use ❑ Antibiotic stewardship duties included in medical director position description ❑ Antibiotic stewardship duties included in director of nursing position description ❑ Leadership monitors whether antibiotic stewardship policies are followed ❑ Antibiotic use and resistance data is reviewed in quality assurance meetings	
ACCOUNTABILITY	
2. Has your facility identified a lead(s) for antibiotic stewardship activities?	❑ Yes ❑ No
If yes, indicate who is accountable for stewardship activities (select all that apply) ❑ Medical director ❑ Director or assistant director of nursing services ❑ Consultant pharmacist ❑ Other_____	
DRUG EXPERTISE	
3. Does your facility have access to individual(s) with antibiotic stewardship expertise?	❑ Yes ❑ No
If yes, indicate who is accountable for stewardship activities (select all that apply) ❑ Consultant pharmacy has staff trained/is experienced in antibiotic stewardship ❑ Partnering with stewardship team at referral hospital ❑ External infectious disease/stewardship consultant ❑ Other_____	

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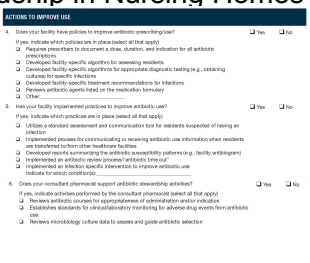
Checklist for Core Elements of Antibiotic Stewardship in Nursing Homes (continued)…



ACTIONS TO IMPROVE USE

4. Does your facility have policies to improve antibiotic prescribing/use? ❑ Yes ❑ No

If yes, indicate which policies are in place (select all that apply)
- ❑ Requires prescribers to document a dose, duration, and indication for all antibiotic prescriptions
- ❑ Developed facility-specific algorithm for assessing residents
- ❑ Developed facility-specific algorithms for appropriate diagnostic testing (e.g., obtaining cultures) for specific infections
- ❑ Developed facility-specific treatment recommendations for infections
- ❑ Reviews antibiotic agents listed on the medication formulary
- ❑ Other:_____

5. Has your facility implemented practices to improve antibiotic use? ❑ Yes ❑ No

If yes, indicate which practices are in place (select all that apply)
- ❑ Utilizes a standard assessment and communication tool for residents suspected of having an infection
- ❑ Implemented process for communicating or receiving antibiotic use information when residents are transferred to/from other healthcare facilities
- ❑ Developed reports summarizing the antibiotic susceptibility patterns (e.g., facility antibiogram)
- ❑ Implemented an antibiotic review process/"antibiotic time-out"
- ❑ Implemented an infection specific intervention to improve antibiotic use
Indicate for which condition(s):_____

6. Does your consultant pharmacist support antibiotic stewardship activities? ❑ Yes ❑ No

If yes, indicate activities performed by the consultant pharmacist (select all that apply)
- ❑ Reviews antibiotic courses for appropriateness of administration and/or indication
- ❑ Establishes standards for clinical/laboratory monitoring for adverse drug events from antibiotic use
- ❑ Reviews microbiology culture data to assess and guide antibiotic selection

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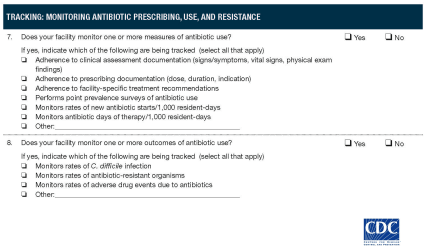
Checklist for Core Elements of Antibiotic Stewardship in Nursing Homes (continued)…



TRACKING: MONITORING ANTIBIOTIC PRESCRIBING, USE, AND RESISTANCE

7. Does your facility monitor one or more measures of antibiotic use? ❑ Yes ❑ No

If yes, indicate which of the following are being tracked (select all that apply)
- ❑ Adherence to clinical assessment documentation (signs/symptoms, vital signs, physical exam findings)
- ❑ Adherence to prescribing documentation (dose, duration, indication)
- ❑ Adherence to facility-specific treatment recommendations
- ❑ Performs point prevalence surveys of antibiotic use
- ❑ Monitors rates of new antibiotic starts/1,000 resident-days
- ❑ Monitors antibiotic days of therapy/1,000 resident-days
- ❑ Other:_____

8. Does your facility monitor one or more outcomes of antibiotic use? ❑ Yes ❑ No

If yes, indicate which of the following are being tracked (select all that apply)
- ❑ Monitors rates of *C. difficile* infection
- ❑ Monitors rates of antibiotic-resistant organisms
- ❑ Monitors rates of adverse drug events due to antibiotics
- ❑ Other:_____

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Clinical Pearls

- **Emergency preparedness:**
  - IV's for Hydration
  - Enteral Feeding Formulas
  - Shortage of medications
- **Medications:**
  - Albuterol HFA dosing, 2-8 puffs every 20 minutes x 3 doses
  - Indication: Bronchospasm
  - Spacer?
  - PPE?
- **Hydroxychloroquine (Plaquenil)**
  - Anti-inflammatory and immunomodulatory activity
  - Malaria prophylaxis and treatment
  - Lupus
  - Rheumatoid arthritis
  - Under investigation for prophylaxis and treatment of CoVID-19
  - 400 mg orally BID on day one then daily for 5 days
  - 400 mg orally BID on day one then 200 mg BID for 4 days
  - 600 mg orally BID on day one then 400 mg daily on days 2-5

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Clinical Pearls (continued)…

- Chloroquine – (Aralen-discontinued) – Cousin of Hydroxychloroquine (didn't buy the Hydroxyl group)
  - Less availability then Hydroxychloroquine
- Azithromycin (Z-Pak)
  - 500 mg orally day 1
  - Then 250 mg orally days 2-5
  - 500 mg IV for 5 days
  - Anti-inflammatory effect
- Combination of Hydroxychloroquine and Azithroymicin
  - QTC prolongation
  - Written diagnosis
  - No refill

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Clinical Pearls (continued)…

- Corticosteroids
  - Inconsistent, confusing and inconclusive
- NSAIDS
  - No compelling evidence to support an association between Ibuprofen and negative outcomes in patients with CoVid-19
- Vitamin C
  - Not recommended at this time
  - High dose IV Vitamin C
  - Not a sexy drug

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Deprescribing Opportunities:

- Sliding Scale Insulin- Beer's List
- Proton Pump Inhibitors-need to continue after 12 weeks?
- Nebulized meds- D/C or switch to Inhaler
- Appetite stimulants -useful?
- Cranberry supplements
- Vitamins and Supplements
- Herbals
- IR to ER dosage forms
- Biphosphanates- greater than 5 years?
- Monitoring parameters- high touch point for nurses.

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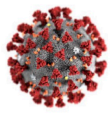

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https://www.caltcm.org/covid-19

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