

Good Drugs and Bad Bugs:

Antimicrobial Stewardship and Resistant Pathogens in Post-Acute and Long-Term Care Settings

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VA



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Specialty Care Services
Centers of Innovation



CASE WESTERN RESERVE
UNIVERSITY
SCHOOL OF MEDICINE



Speaker Disclosures

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The opinions presented herein are my own and do not represent those of the Veterans Affairs system or the federal government.





Learning Objectives

- Discuss implementation of contact precautions for multi-drug resistant organisms (MDROs) in long-term care settings, balancing risks and benefits
- Review general principles of antibiotic stewardship and its importance in post-acute and long-term care (PALTC) settings

A vertical graphic on the left side of the slide depicting an iceberg. The top portion, representing the visible tip, is white and jagged, floating on a thin layer of blue water. The bottom, much larger portion is submerged in a deep blue, textured water, illustrating the concept of hidden reservoirs.

Nursing Homes as Reservoirs of MDROs

- Analysis of MDS data over 15 months
- Of ~4 million NH residents, 5% with MDRO *infection*
- For those infected with an MDRO during the study, 57% in NH, 41% in acute care
- Colonization rates?

Colonization among Nursing Home Residents

Methicillin-Resistant *Staphylococcus aureus* (MRSA)

- Prevalence may exceed 50%
- ~25% acquire at NH

Resistant Gram-negatives

- MDR-GNB colonization 27% (11 – 59%)
- Prevalence of FQ-resistance may exceed 50%
- 17% with ESBL; 1% with CRE

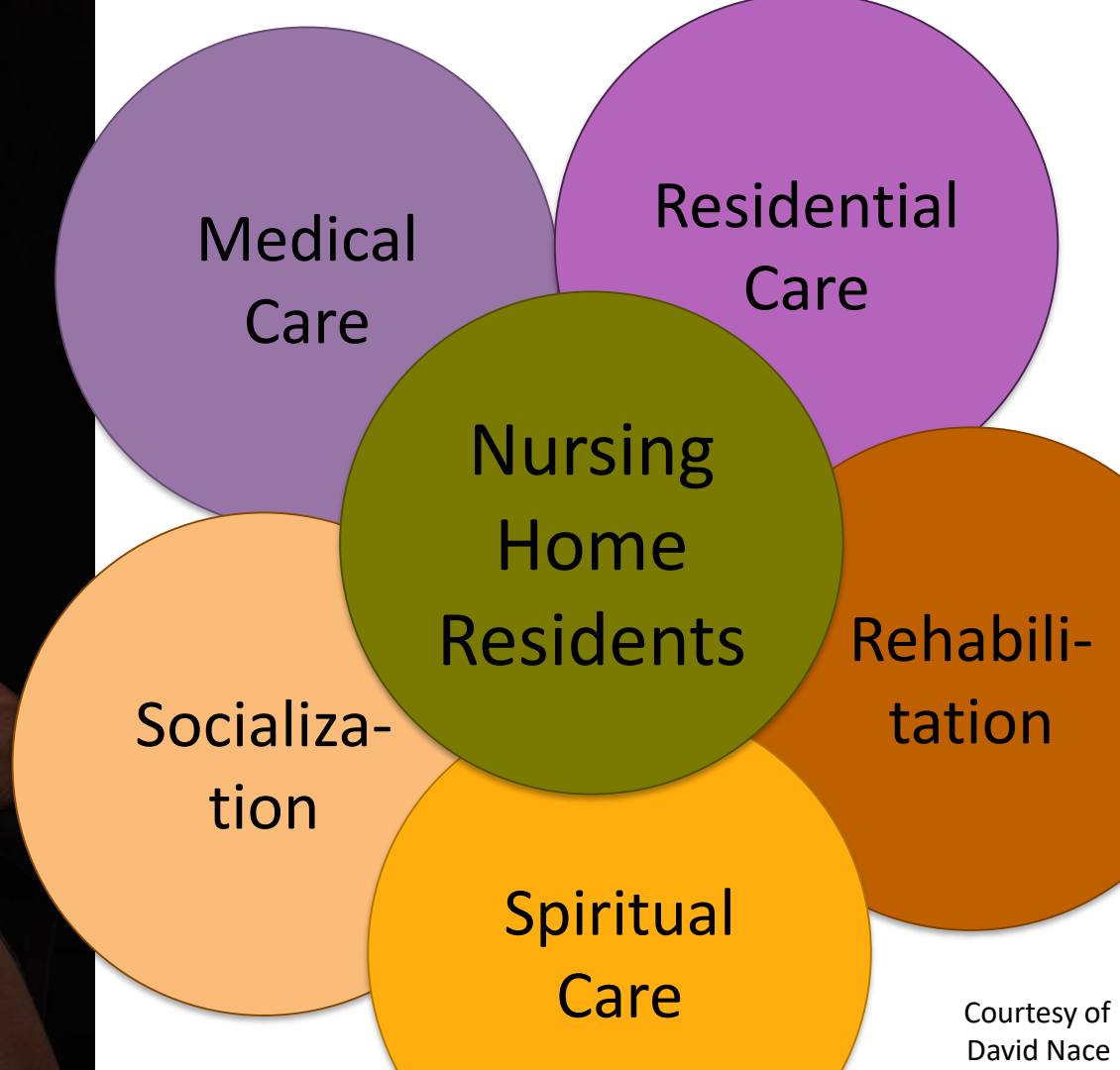
Reviewed in Dumyati *et al.* 2017. Current Infectious Disease Reports 2017 April;19(4).

Aliyu *et al.* AJIC 2017 45;512-8



Alphabet Soup of MDR GN

- Fluoroquinolone-resistant GN bacteria
- Extended-spectrum Beta-lactamase (ESBL) producing bacteria
- Carbapenem-Resistant *Enterobacteriaceae* (CRE)
 - *Klebsiella pneumoniae* carbapenemase (KPC)
 - New Delhi Metallo-beta-lactamase (NDM)





Microcosm of Public Health

Balance between personal rights & public safety

Home-like environment

Social Interactions

Recreation

Privacy

Sexuality

Safety

Medical care

Rehabilitation Services

Protection from disease



Contact Precautions

The goal is to prevent transmission of pathogens from one resident to another by health care workers' hands, clothes or equipment.

We do this by having health care workers use personal protective equipment when caring for residents.

The burden is on healthcare workers

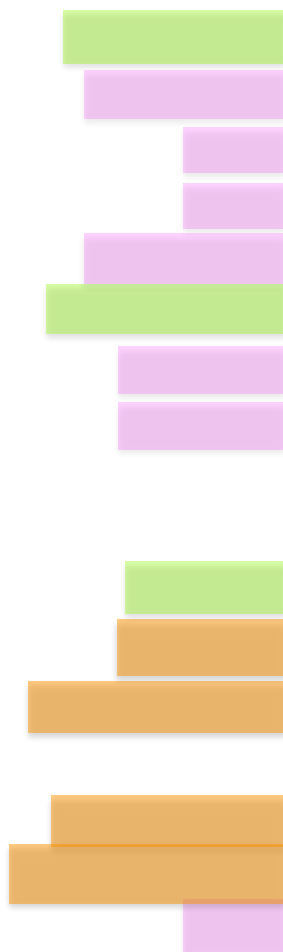
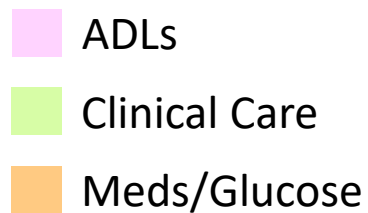
Transmission of Bacteria to Staff

During Resident Care

- Prospective observational study in community nursing homes
VA Community Living Centers
Blanco *et al.* Antimicro Agent & Chemo 2018 61(10) e790-17
Blanco ICCE 2018 39;1425-30
Pineles AJIC 2017 45; 947-53
Roghmann *et al.* ICHE 2015 36(9); 1050-1057
- Swabs from residents and staff gown, gloves (after normal care)

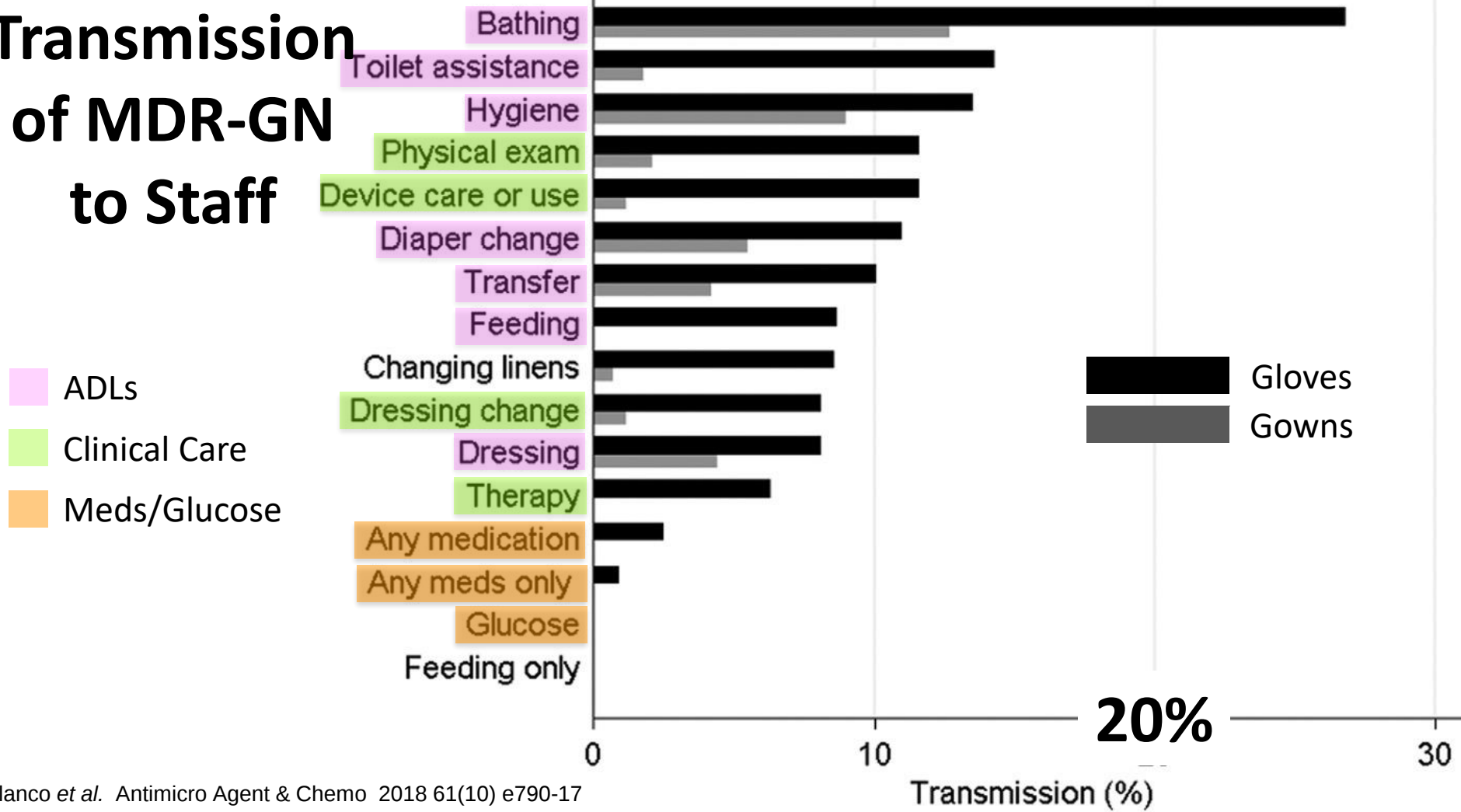
Setting	MRSA		MDR-GN	
	Colonized	Transmission to gloves/gown	Colonized	Transmission to gloves/gown
Community NH	28%	24%/14%	19%	11%
VA CLC	46%	20%/11%	31%	9%

Transmission of MRSA to Staff



20%

Transmission of MDR-GN to Staff



Transmission of Bacteria to Residents

Based on Types of Precautions Used

- Prospective study comparing resident acquisition of MDROs on unit with glove use for every resident vs. as needed contact precautions.
- Swabs from residents on admission, discharge and periodically during study period (6/1998 – 12/1999)

Trick et al. JAGS 2004 52(2003-2009)

Organism	Glove Use	Contact Precautions	Relative Risk (95% Confidence Interval)	P-value
	Number of Patients/ Number at Risk (%)			
MRSA	13/64 (20)	12/65 (18)	0.9 (0.4–1.8)	.79
ESBL-producing <i>Kleb. pneumoniae</i>	6/60 (10)	12/72 (17)	1.7 (0.7–4.2)	.27
ESBL-producing <i>Escherichia coli</i>	8/52 (15)	8/76 (11)	0.7 (0.3–1.7)	.41
VRE	4/59 (6.8)	6/74 (8.1)	1.2 (0.4–4.0)	.77



Are Residents on Contact Precautions*?

- National, retrospective study combining data from 3 databases
- Assessed for residents in *isolation (contact, droplet or airborne precautions)
- 13% of residents with an **MDRO infection** were in isolation
- 69% of NHs had **NO isolation** concurrent with MDRO infection

Are Staff Compliant with Contact Precautions in NHs?

- 4,325 visits observed across 8 VA nursing homes
- More visits for those in isolation vs. not in isolation, likely due to increase care needs. (4.7 vs. 4.2 visits/hour)

Overall Compliance by Healthcare Workers

Gowns	34%
Gloves	58%
Hand Hygiene, Entry	45%
Hand hygiene, Exit	66%

Do these lapses put residents at risk?

- Prospective observational study of residents at 35 NHs
- Of 137 who did not receive antibiotics, 44 acquired an MDRO. (44/137 = 32%)

Risk Factors for getting an MDRO	Hazard Ratio
Not Residing on a Skilled Ward	2.2
Number of Healthcare Worker Visits	2.9
Pressure Ulcers	3.3
GI Medications (MDR-GN only)	1.6



Who Should be on Contact Precautions and When?

MRSA	FQ-GNR?	<i>C. difficile</i>
ESBLs	MRSE?	<i>C. auris</i>
CRE	VRE?	(TBD)

- What do those letters mean again?
- For how long?
- Colonized or Infected?
- Surveillance cultures?
- Did they get an MDRO from acute care?

Timeframes to Discontinue Contact Precautions

Bug	Criteria to Discontinue	Timeframe
MRSA	3 consecutive negative weekly surveillance cultures	Consider 6 months for LTC residents & other high risk
ESBLs, CRE	Determine on case-by-case basis; at least 2 consecutive negative weekly rectal swabs	• 6 months since last positive culture & no (relevant) infection & no antibiotic exposure. • If susceptible to ≤ 2 antibiotics, indefinite contact precautions
<i>C. diff</i>	Diarrhea has resolved & stool is contained	• At least 48 hours after diarrhea stops; 7-10 days may be better • Terminal cleaning of the room

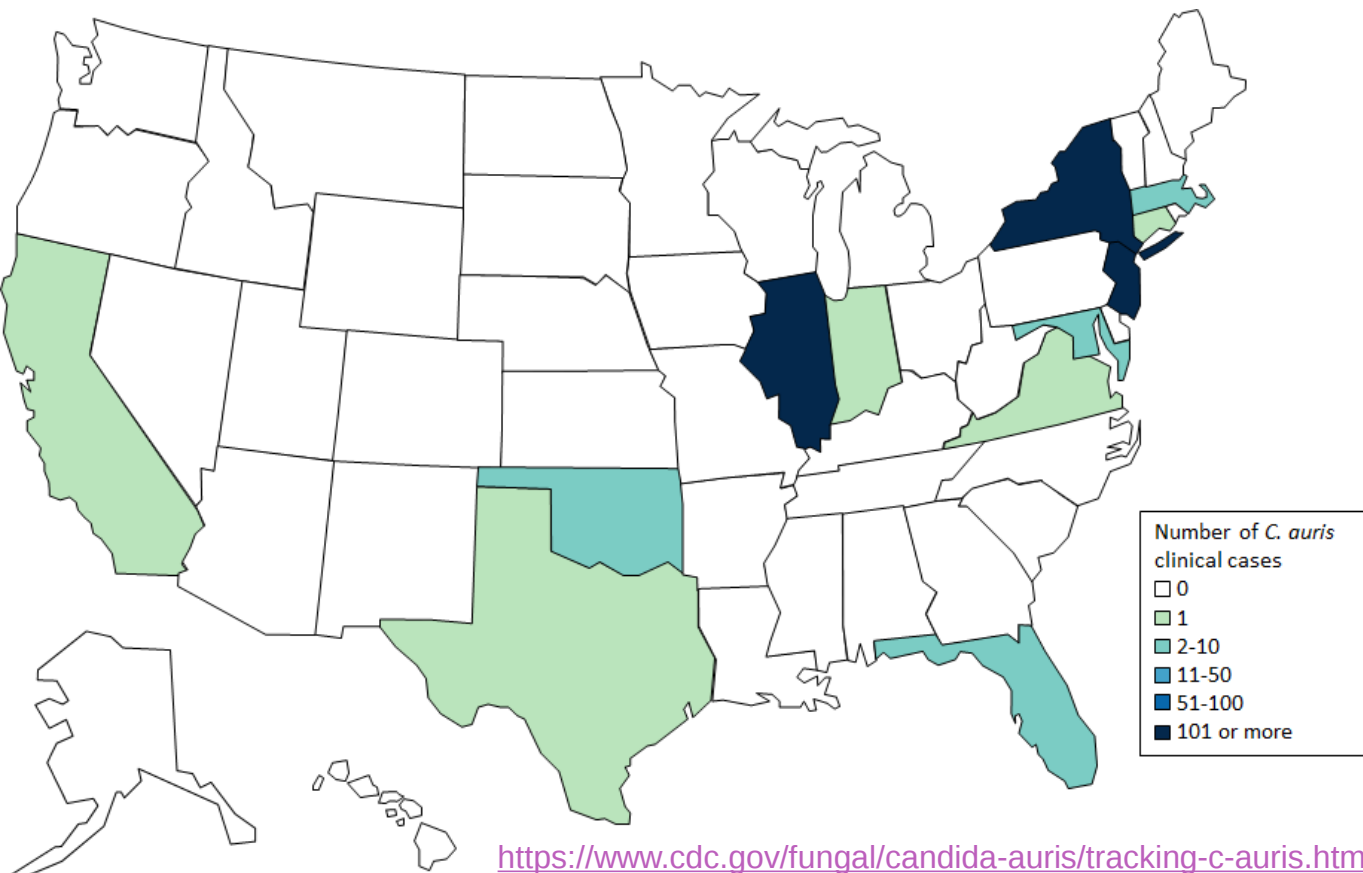


Candida auris

- New global health threat
- Difficult to identify using standard laboratory methods
- Causes outbreaks in healthcare settings
- Some are susceptible to echinocandins (*i.e.*, caspofungin, micafungin, anidulafungin)
- May be resistant to all 3 major classes of antifungals

Search for “CDC *Candida auris*” to more information

Clinical Cases Reported as of 12/31/2018



- Infections: blood, wounds, ears.
- Also found in urine, respiratory tract
- Contact precautions



Targeted Infection Prevention Study

For residents with urinary catheters or feeding tubes

- Hand hygiene before/after care
- Gown & glove use during morning/evening care, device care
- Staff education (intensive!)
- Active surveillance for MDROs



Targeted Infection Prevention Study

- 418 residents enrolled; >6000 samples

Outcome	Rate Ratio
MDRO prevalence	0.77
New MRSA acquisitions	0.78
Risk of first CAUTI	0.54
Risk of all CAUTI	0.69

- No change in GNR acquisition, feeding-tube associated pneumonia or skin/soft tissue infections



Precautions

Standard Precautions
(aka Universal
Precautions)

Infection prevention practices that apply to all residents, regardless of diagnosis or presumed infection status

Enhanced Barrier
Precautions

Use gown and gloves during high-contact resident care activities with opportunities for transfer of MDROs to staff hands and clothing

Contact
Precautions
(subset of Transmission-
based Precautions)

Measures to prevent transmission of infectious agents spread by direct or indirect contact with the resident or their environment

Who Should be on Enhanced Barrier Precautions and When?

High Risk Residents	High Risk Activities
Bed Bound	Dressing
Incontinent/Urinary Catheter	Transferring
Central Line/Other Devices	Hygiene/Bathing
Wounds	Changing Linens
	Toileting



Enhanced Barrier Precautions

Goals for Out-of-Room

Residents should be:

- Clean
- Contained
- Cooperative

Resident hand hygiene

- Before meals
- After the toilet
- After dressing





Contact Precautions

The resident should stay in their room if they are...

- Colonized or Infected with a novel or targeted multi-drug resistant organisms
- Having diarrhea
- Unable to cover/contain secretions
- Vomiting (norovirus)
- Sneezing/Coughing (influenza, other respiratory virus)
- Draining wounds
- Possibly with scabies

“You have a drug-resistant bacteria.”



**I wear this to
protect myself**

**“I’m wearing this to
help keep you safe.”**



**I am a Patient
Safety Champion!**



Infection Prevention and Control

You are a
Patient Safety
Champion!

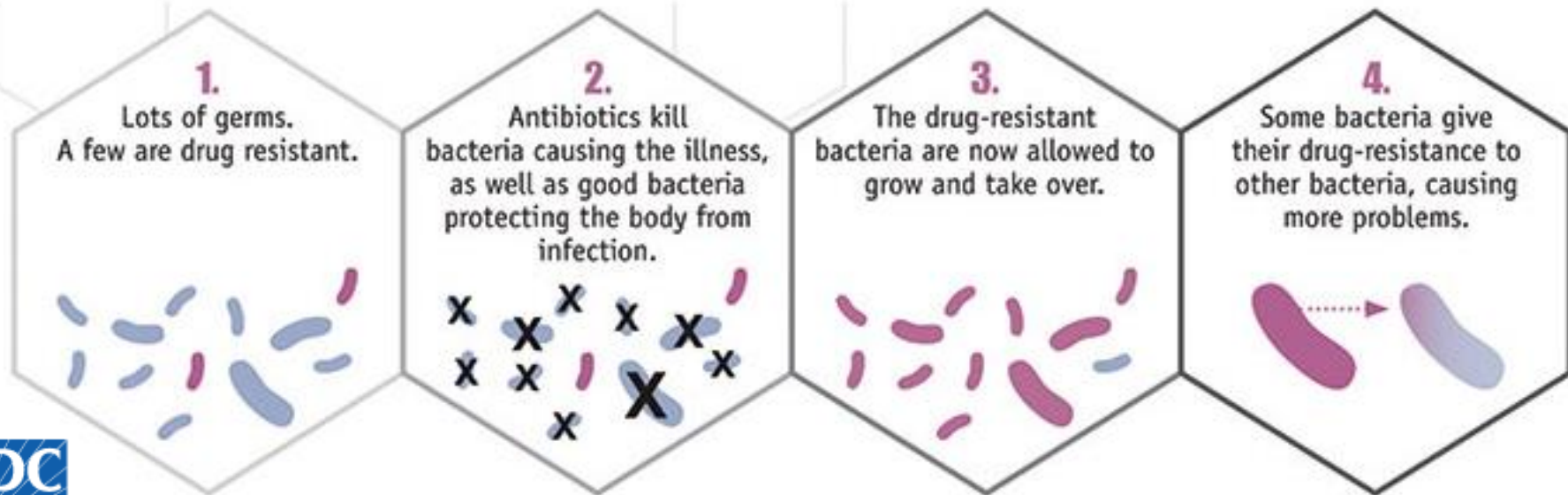
Learning Objectives

- Discuss implementation of contact precautions for multi-drug resistant organisms (MDROs) in long-term care settings, balancing risks and benefits
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Selective Pressure



How Antibiotic Resistance Happens



Conversation in Nursing Home

My mother burst into tears when I helped her put on her shoes for going outside. Do you think she might have a UTI?

Hmmm. Could be a change in mental status. We could check a urine....

Well, could you give her an antibiotic, you know, just in case? Last time she had cipro and her mood improved pretty quickly.

Conversation in Nursing Home

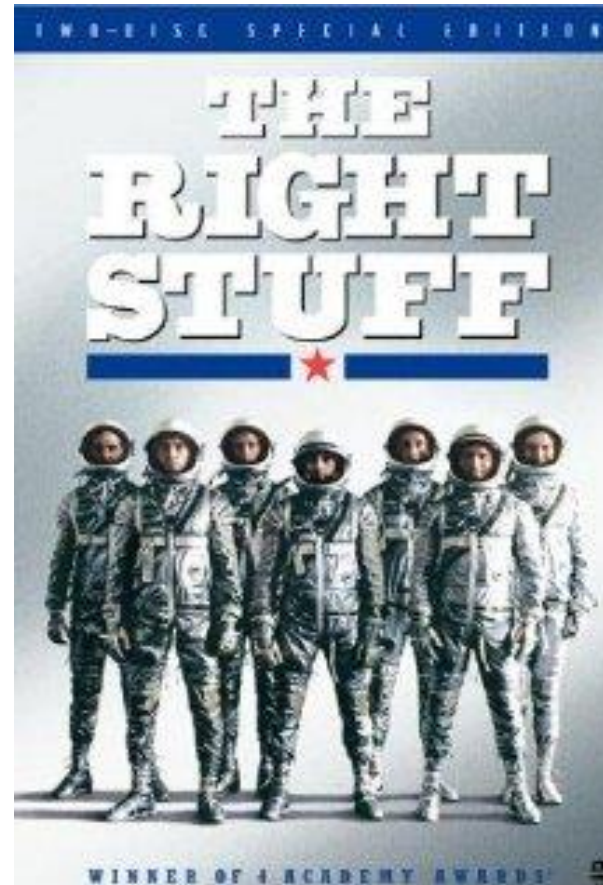
Mr. Jones has a terrible cough. I'm worried about pneumonia.

That's too bad! He was is such a good mood a couple of nights ago when his family brought in those pizzas.

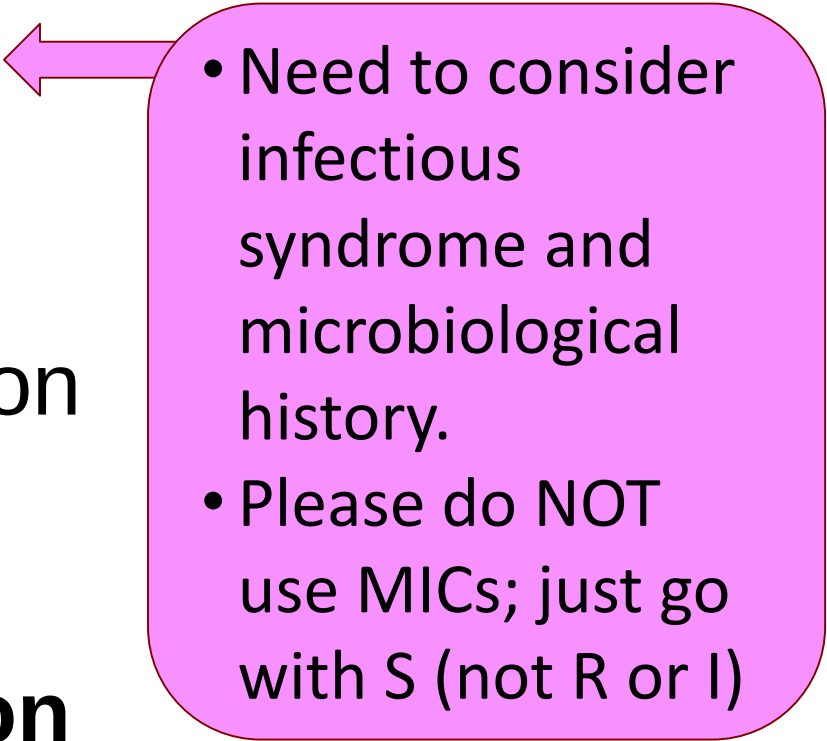
Yeah, poor guy. He says his legs are swollen and he just can't get a deep breath. Maybe he needs a z-pack to help his breathing.

Antimicrobial Stewardship Team

- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

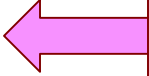


Antimicrobial Stewardship

- Right drug
 - Right dose
 - Right duration
 - Right route
 - **Right reason**
- 
- Need to consider infectious syndrome and microbiological history.
 - Please do NOT use MICs; just go with S (not R or I)

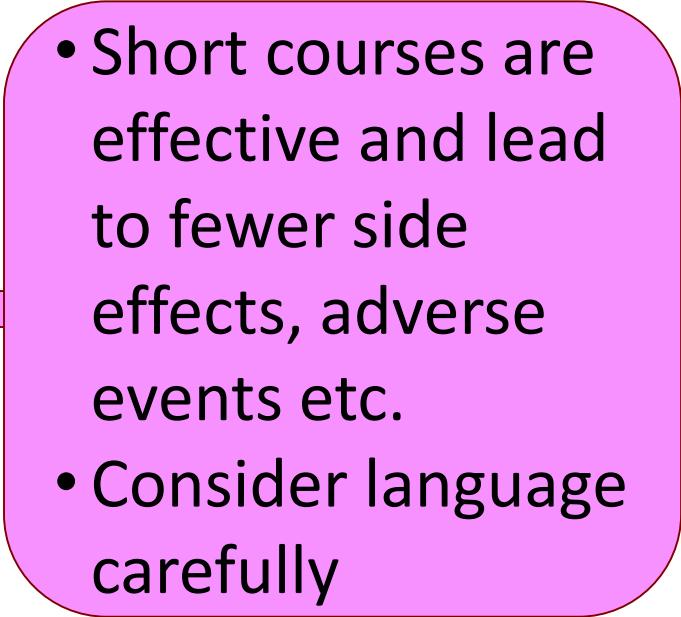
Antimicrobial Stewardship

- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

- 
- Start low and go slow does NOT apply.
 - Higher doses are better for killing bacteria

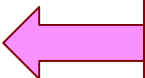
Antimicrobial Stewardship

- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

- 
- Short courses are effective and lead to fewer side effects, adverse events etc.
 - Consider language carefully

Antimicrobial Stewardship

- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**



Oral when possible
in nursing home

Antimicrobial Stewardship

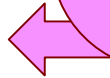
- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

Start antibiotics in people who are clearly sick and for whom ***bacterial infection*** is high in differential

Antimicrobial Stewardship

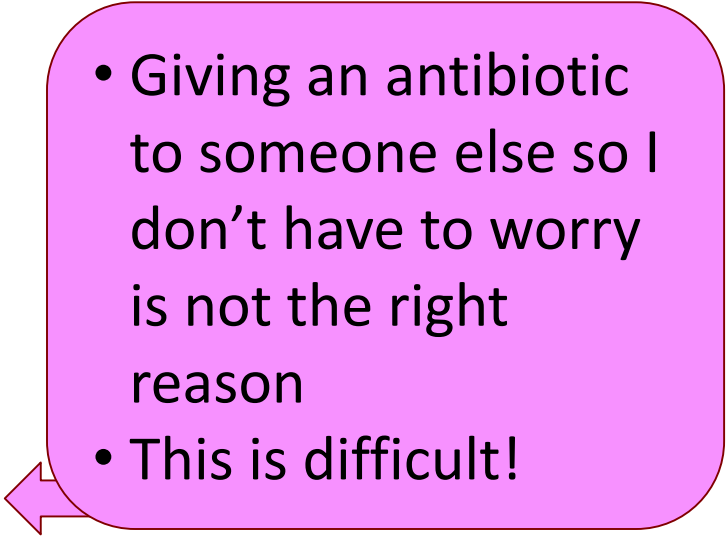
- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

- Get cultures before starting antibiotics.
- Order other tests as needed.
- Use results of diagnostic tests and clinical course to narrow or stop antibiotics

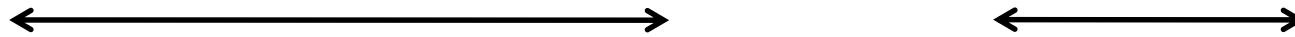
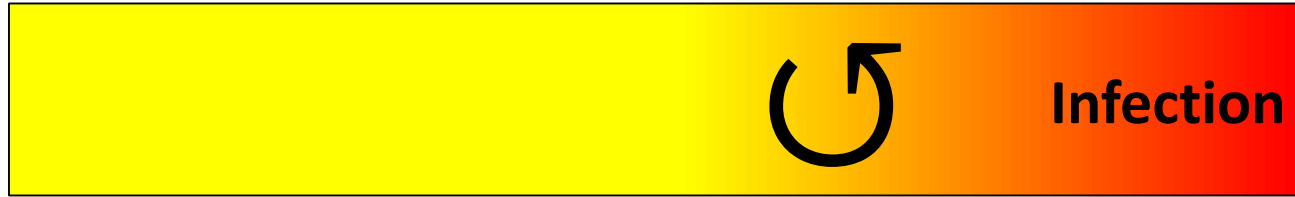


Antimicrobial Stewardship

- Right drug
- Right dose
- Right duration
- Right route
- **Right reason**

- 
- Giving an antibiotic to someone else so I don't have to worry is not the right reason
 - This is difficult!

Antibiotic Stewardship



Do not treat
with antibiotics

Active monitoring
Supportive Care
Diagnostic Tests
Keep Thinking!!

Start
Antibiotics

No signs/sx of infection

My mother burst into tears
when I helped her put on her
shoes for going outside.

Possible Infection

Mr. Jones has a
terrible cough,
shortness of breath
and leg edema.

Likely Infection

Mrs. Smith has a
temperature of
99.4°F and a hot,
red leg.



**Principles of
Antibiotic
Stewardship**



**Treatment
for Sepsis**



**Antibiotic Use
Protocols**



cms reform of requirements for long-term care facilities



All

News

Images

Videos

Maps

More

Settings

Tools

About 4,860,000 results (0.59 seconds)

Nursing Homes - Centers for Medicare & Medicaid Services - CMS

<https://www.cms.gov/medicare/.../guidanceforlawsandregulations/nursing-homes.html> ▼

Dec 12, 2018 - Medicare and Medicaid Programs; **Reform of Requirements for Long-Term Care Facilities**. Nursing home surveys are conducted in accordance ...

Federal Register :: Medicare and Medicaid Programs; Reform of ...

<https://www.federalregister.gov/.../medicare-and-medicaid-programs-reform-of-requir...> ▼

Jump to **Relationship to Other Requirements** - ... disorders or who require long-term and intensive psychotherapy. ... rendered in LTC facilities that CMS finds qualify as an IMD. ... for whom the facility cannot provide appropriate care.

Statutory and Regulatory ... · **Why revise the long-term ...** · **Quality of Care and ...**

You've visited this page 5 times. Last visit: 10/11/18



Search on March 4th, 2019

Page 181
(total pages:
185)

§ 483.80 Infection control.

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.

(3) An antibiotic stewardship program that includes antibiotic use protocols and a system to monitor antibiotic use.

CMS Manual System

Pub. 100-07 State Operations Provider Certification

Department of Health & Human
Services (DHHS)

Centers for Medicare & Medicaid
Services (CMS)

Transmittal 169- Advanced
Copy

Date:

SUBJECT: Revision to State Operations Manual (SOM) Appendix PP for Phase 2, F-Tag Revisions, and Related Issues

696 pages, Effective November 28, 2017

F-tags *State Operations Manual*

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

Table of Contents

(Rev. XXX, XX-XX-17)

<https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Nursing-Homes.html>



Investigative Summary... (page 659)

Do protocols address antibiotic prescribing practices?

- Documentation of the indication, dose, and duration of the antibiotic
- **Review of laboratory reports** to determine if the antibiotic is indicated or needs to be adjusted;
- An infection assessment tool or management algorithm is used when prescribing

Is there a system to monitor antibiotic use (i.e., antibiotic use reports, antibiotic resistance reports)?





Examples of Deficiencies... (page 659-60)

Immediate Jeopardy:

- Results of microbiological culture (indicating resistant bacteria) not communicated to practitioner; antibiotic not changed; resident hospitalized for complications

Actual Harm:

- No protocols or monitoring system. 2 residents on antibiotics without appropriate indication. Both developed *C. difficile* infection.



Antibiotic Use Protocols

Focus on common infections and

- Diagnostic criteria
- Appropriate antibiotic choices
- Length of therapy

Use standardized assessment criteria

*Consider adapting from the Loeb Minimum Criteria, revised McGeer Criteria or from the **AHRQ website***



Measure Antibiotic Use

Metric	Pros	Cons
	Estimates total burden of antibiotic use. Tracks changes in overall use.	
Defined Daily Dose (DDD): Standardized doses of antibiotics per 100 (or 1000) resident days	World Health Organization standardized measures of antibiotics	
Number of antibiotic prescriptions for duration >7 days per month	Tracks efforts to reduce excessive length of prescriptions.	

Monitor Antibiotic Use and Resistance

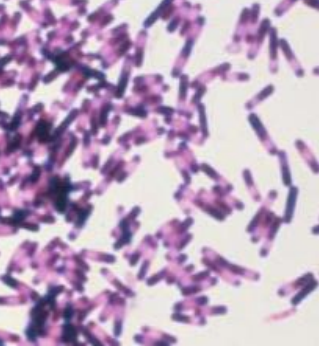
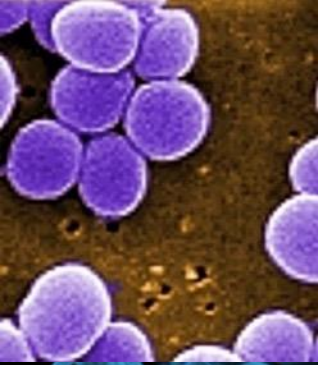
Review antibiotic prescriptions

- upon admission
- upon return from hospital or ED
- started by covering provider
- during monthly med review

Review surveillance data of resistant bacteria

Develop an antibiogram

- may have to include only urine



Leverage the Data

Collect & Analyze

*Compliance with
Antibiotic Use Protocols*

Measure Antibiotic Use

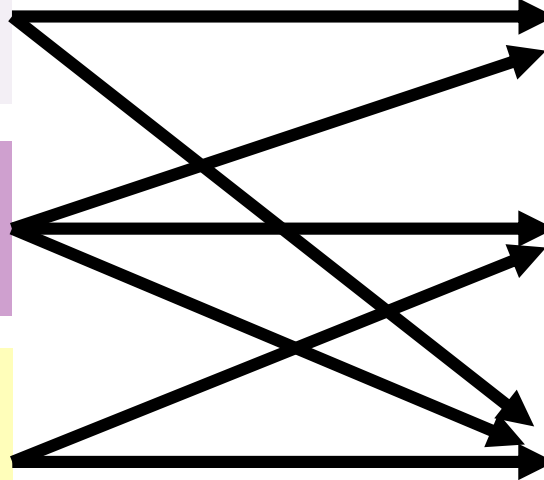
*Monitor Antibiotic Use
and Resistance*

Share

**Feedback to
Individuals**

**Feedback to
Whole Facility**

Education





Feedback



Written reports to all staff:

- Overall antibiotic use

- Compliance with protocols

- Surveillance data for drug-resistant bacteria
and for *C. difficile*

Written reports to individual providers:

- Provider's antibiotic use

- Provider's compliance with antibiotic use protocols

- Written acknowledgement of feedback

Example of Individualized Feedback

<u>Metric</u>	<u>Facility</u>	<u>Dr. A</u>
Antibiotic prescription with dose, duration & indication	27 of 42 (64%)	8 of 8 (100%)
Urine culture ordered for residents indication of UTI	16 of 20 (80%)	2 of 4 (50%)

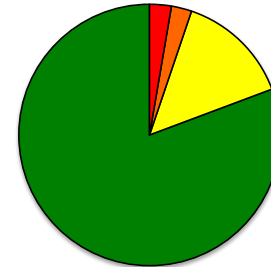
Reviewed and discussed:

- Antibiotic Use Protocols
- Antibiotic Stewardship Policy
- Antibiotic Use

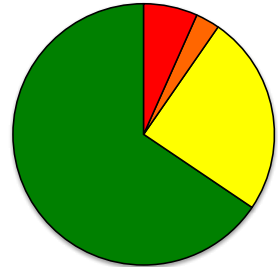
Dr. A,
Sign and Date: _____
Medical Director,
Sign and Date: _____

- 1 - 7 days
- 8 - 14 days
- 15 - 28 days
- >28 days

Length of Therapy



Facility



Dr. A



Education



Antibiotic Stewardship

- To all staff, at least annually
- Document mode & frequency
- To residents (and family members)

Antibiotic Use Protocols

- To all prescribers, medical & nursing staff
- Document mode & frequency



There's help...



- Template of an Antibiotic Stewardship Policy
- Crosswalk between the policy and specific elements in the Interpretive Guidance Document
- List of (Free) Resources to help support your efforts

Jump *et al.* JAMDA. 2017 18(11): 913-920;
DOI [10.1016/j.jamda.2017.07.018](https://doi.org/10.1016/j.jamda.2017.07.018). OPEN ACCESS

Implementation of ASP

- **20** studies with quantitative outcomes
 - 5 randomized controlled trials
 - 15 quasi-experimental analyses
- Quality: 11 good, 7 fair, 2 poor
- **14 with measurable changes**
 - Reduced antibiotic starts
 - Reduced total antimicrobial use
 - Increased adherence to guidelines
 - Reduce incidence of *C. difficile* infection and rates of drug-resistant bacteria



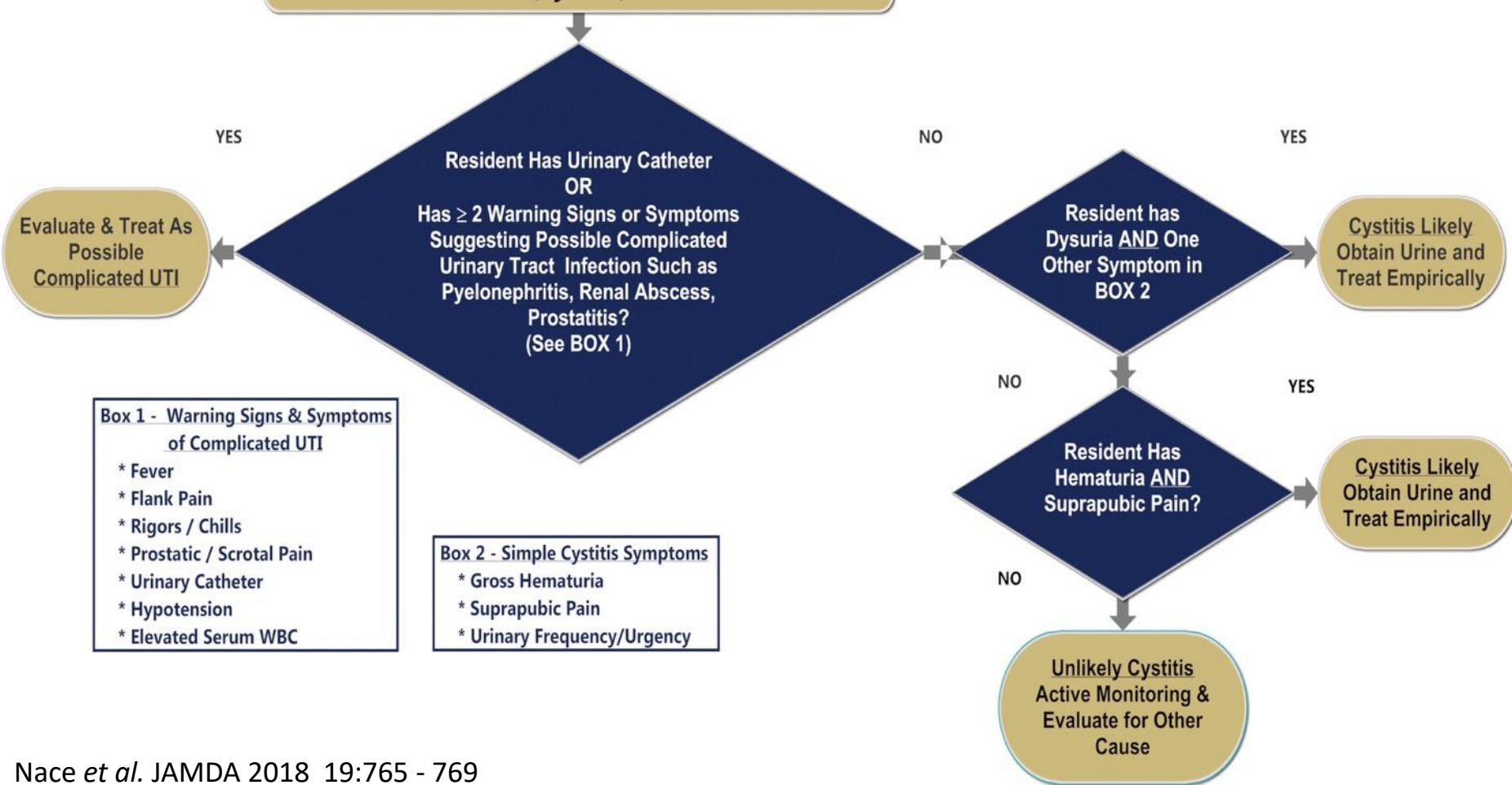
So what works?

Organization: Integrate change into the workflow

- Nurses—pre-prescription
- Prescribers—post-prescription;
communication via electronic medical record

People: Involve professionals with infectious disease expertise

**Is This A Simple Uncomplicated Bladder Infection?
(Cystitis)**





Transitions of Care

- Retrospective study of 5 NHs in southern Wisconsin
- Assessed antibiotic prescriptions for
 - origin (NH, Emergency Dept, outpatient clinic)
 - appropriateness (based on Loeb minimum criteria)

	All Sites	Nursing Home	Emergency Dept	Outpatient Clinic
Total Antibiotic Rx	735 (100%)	640 (87%)	34 (5%)	61 (8%)
Inappropriate Antibiotic Rx	359 (49%)	304 (48%)	16 (47%)	39 (64%)



Infrastructure & Culture

Assessed antibiotic use in 9 nursing homes

Measured antibiotic starts and Days of Therapy (DOT)

Stratified by

- full v part time infection control practitioner
- by RN, LPN retention

Less turnover correlated with few starts and fewer days of therapy (DOT)

Antibiotic Starts and Days per 1,000 Resident Days: Full Time Infection Control Practitioner

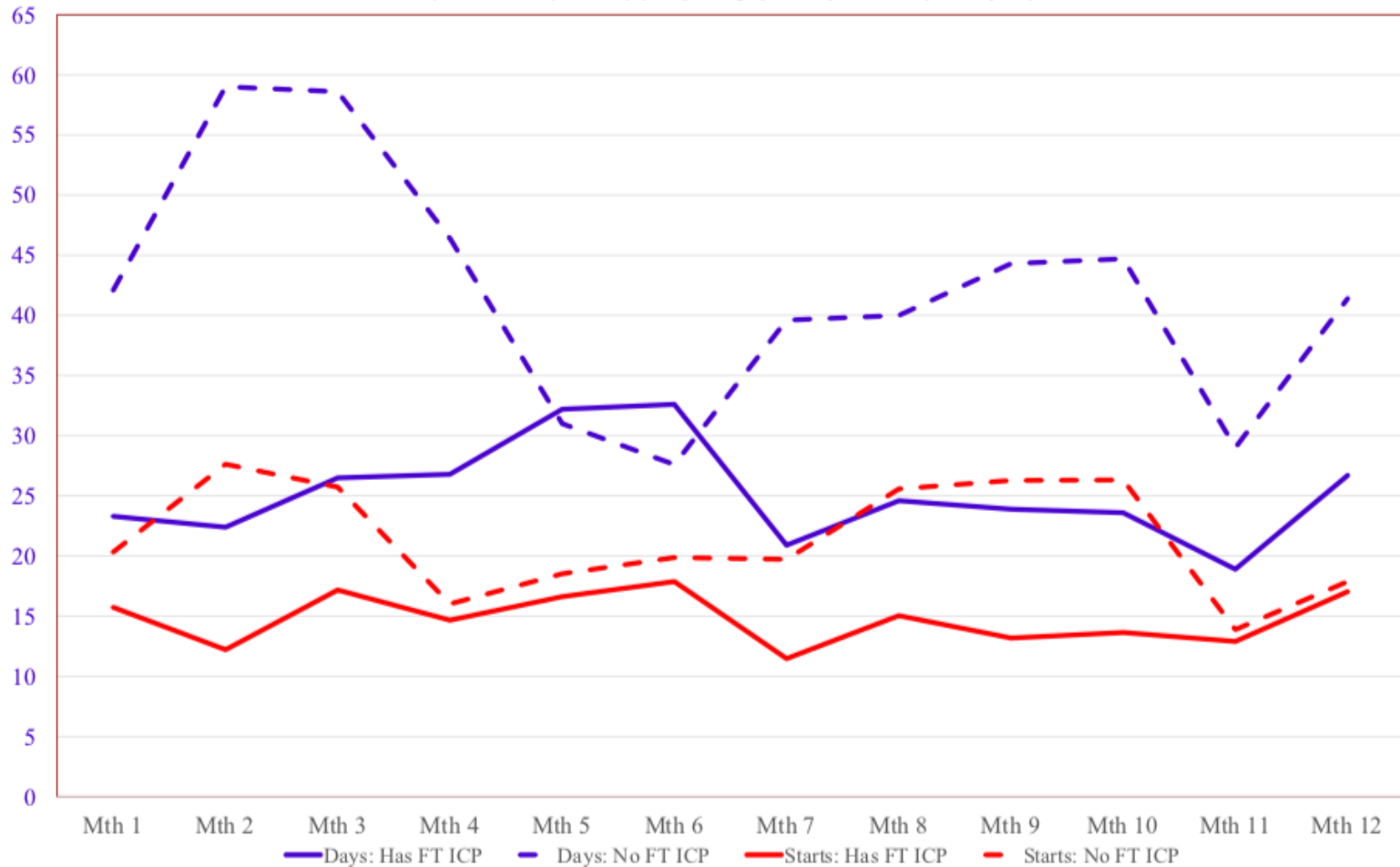
Blue = DOT

Red = Abx Starts

Dashed =
No full time ICP.

Solid =
Full Time ICP

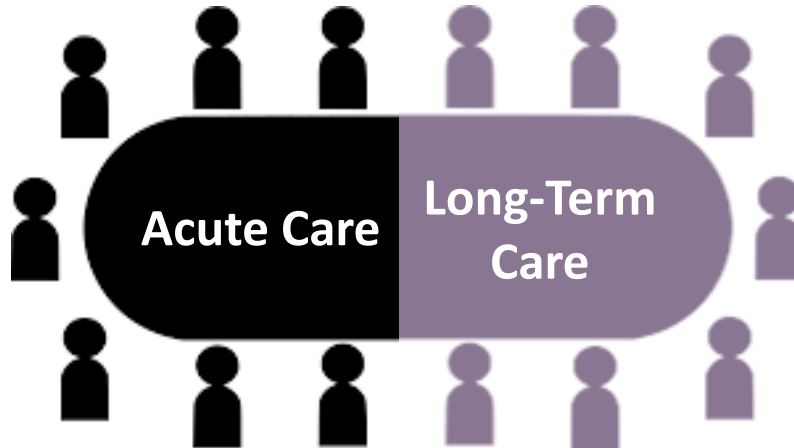
Solid lines are
lower than
dashed lines so
lower abx use
with full time ICP



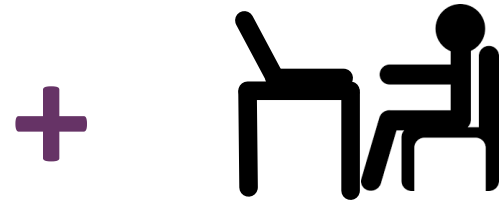
Clinical Interventions

Videoconference Antimicrobial Stewardship Team

**Team Members at Rural VA
(Intervention Site)**



**Infectious Disease Physician
(Off-site)**



**1 hour meeting
each week**

Pilot Project with 2 Sites—1 year

Characteristic	Site A	Site B
Cases Discussed	140	119
Acute Care	98 (70%)	30 (25%)
Long-Term Care	36 (26%)	60 (50%)

Rate of Antibiotic Use in LTC (DOT/1000 DOC)	Site A	Site B
1 year before the intervention	76	76
1 year after the intervention	67*	61*

Stevenson *et al.* ICHE 2018 Oct;39(10):1163-1169

Wilson *et al.* ICHE 2019 Jul;40 (7):810-814



Nursing Home Haiku

Kind care for elders
Rehabilitation place
Many roles, one home.

Thank you!

robinjump@gmail.com or Robin.Jump@va.gov



Department
of Health

Bonus Learning Objective !

Reflect on the influence of the recent CMS changes for antibiotic stewardship programs



Awarded 4 Pulitzer Prizes

<https://projects.propublica.org/nursing-homes/state/OH>; accessed 10/14/18



F 0881

8 Citations in Ohio from
January 21st – April 19th, 2018

By Severity

D 4
E 2
F 2

Severity Scores

least serious most serious

A B C D E F G H I J K L

F 0881 Resident #1

The facility failed to develop an antibiotic stewardship program for monitoring all antibiotic use for residents residing in the facility.

Pharmacist revealed she was not aware the Transitional Care Unit had to have there [sic] own review to ensure appropriate antibiotic use for all prescribed antibiotic use.

How would you address this?

F 0881 Resident #2

The facility failed to ensure residents receiving antibiotic therapy were properly assessed, evaluated and educated before the initiation of the antibiotic therapy.

- Antibiotic orders will be reviewed for appropriateness and clarified with the physician as needed.
- If and when antibiotics were prescribed over the phone, the physician will assess the resident within 72 hours.
- The use of the antibiotics will be monitored in all residents with appropriate lab work.

How would you address this?

F 0881 Resident #24

The facility failed to implement protocols for an antibiotic stewardship program

- The resident's [antibiotic] was ordered for a UTI and contradicted the facility Antibiotic Stewardship Program.
- Resident #24's daily infection assessments were completed 02/15/18 through 02/22/18 only, and did not contain any signs or symptoms of infection.
- The facility had not met as a team to review Resident #24's [antibiotic].
- No documentation from the physician indicating the necessity of this antibiotic since the resident's admission to the facility.

How would you address this?

F 0881 Resident #30

The facility failed to implement protocols for an antibiotic stewardship program

- 02/15/18. The facility nurse faxed a note to the physician indicating Resident #30's left foot was swollen, red and warm to the touch. Severe pain. Resident #30 requested an antibiotic. The physician's response was [antibiotic] 500 mg, for ten days.
- 02/16 - 02/25/18. Daily infection assessments were incomplete and contained no documentation of signs/symptoms of infection. Review of nursing notes and physician's notes revealed no documentation regarding the [antibiotic] order.
- Review revealed Resident #30 was not on the facility infection control log for log.

How would you address this?

F 0881 Resident #10

The facility had not implemented their Antibiotic Stewardship Program (ASP) and did not follow the care path instructions for the urinary tract infection pathway.

- 03/18/18. Resident #10 had acute mental status changes. The urine was cloudy with large amounts of sediment and mucous that was foul smelling. A new order was received to start [antibiotic] 500 mg for ten days.
- A urine culture was not ordered.
- The last urinary catheter changes was 02/08/18. The care path was to change the resident's catheter.

How would you address this?

F 0881 Resident #67

The facility failed to ensure a system was in place to monitor adequate indications for long term use of an antibiotic.

Review of the medical record of Resident #67 revealed no documentation of justification for long term antibiotic use [Bactrim] since (YEAR).

A urine culture from 01/21/18 revealed an abnormal urinalysis and an *Escherichia coli* resistant to the antibiotic Bactrim. Continued review of the medical record revealed no documentation the physician was made aware of the culture and sensitivity results.

How would you address this?

F 0881 Resident #11

The facility failed to ensure a system was in place to monitor adequate indications for long term use of an antibiotic.

Resident #11 was on antibiotics for UTI on 07/03/17, 08/12/17, 08/24/17, 11/16/17, 12/03/17 and 02/09/18.

The 6 physician orders for antibiotics for Resident #11 mentioned above, did not contain a medical diagnosis. Review of the facility's Antibiotic Stewardship protocol under section four states that the dose, duration, route and indication of every antibiotic prescription MUST be documented.

How would you address this?

F 0881 Resident #7, Part 1

The facility failed to identify one resident had been receiving **antibiotic eye drops continuously**, since admission to the facility.

The DON and ADON denied knowledge of Resident #7 receiving antibiotics. The DON stated she reviews an antibiotic report monthly which was obtained through the facility electronic health records, and an antibiotic report of 3/18/18 did not have Resident #7 listed.

The DON revealed all antibiotics, including eye drops were tracked by the facility to ensure appropriateness, correct diagnosis, and ordered for an appropriate duration of time. She further revealed infections were reviewed every Tuesday by the administrative team, and then monthly as part of the facility Antibiotic Stewardship Program.

Review of the Medscape revealed bacterial overgrowth could occur with prolonged use. The usual dosage was a **half inch ribbon** three times a day for two days, then twice a day, for five days.

F 0881 Resident #7, Part 2

The facility failed to identify one resident had been receiving **antibiotic eye drops continuously**, since admission to the facility.

Policy states: All resident antibiotic regimens will be documented on the facility-approved antibiotic surveillance tracking form. The information gathered will include:

- resident's name and medical record number
- unit and room number
- date symptoms appeared
- name of antibiotic
- start date of antibiotic
- pathogen identified
- site of infection
- date of culture
- stop date
- total days of therapy
- outcome
- adverse events

The policy also states the Consultant Pharmacist will identify, and flag orders for antibiotics that are not consistent with antibiotic stewardship practices.

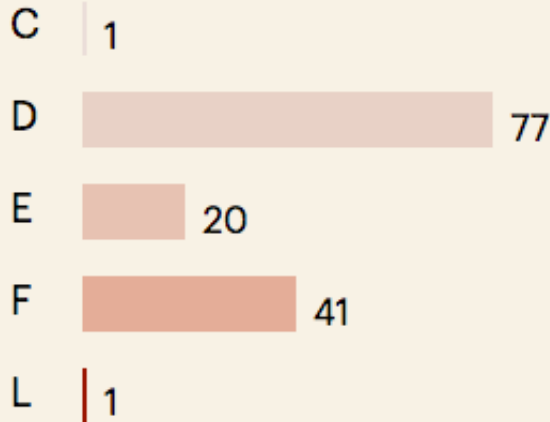
How would you address this?

<https://projects.propublica.org/nursing-homes/state/OH>; accessed 10/14/18



F 0880

137 Citations in Ohio from
November 17th, 2017 – April 26th, 2018



Severity Scores

least serious

most serious

A B C D E F G H I J K L

F 0880 Immediate Jeopardy

The facility failed to maintain acceptable infection control practices in the area of isolation procedures for an influenza outbreak.

- Staff members provided care to Resident #37 without using appropriate personal protective equipment (PPE) for droplet precaution isolation
- Allowed Resident #22 who also exhibited symptoms of influenza, to wander throughout the facility and interact with other residents putting them at risk for serious harm.
- This deficient practice had the potential to spread influenza to all 78 residents residing in the facility.

01/08/18

- 01/08/18 6:15AM Resident #37 developed vomiting, diarrhea, lethargy, a fever of 101.3 degrees Fahrenheit (F), and diminished lung sounds throughout all lung fields
- CNP notified; influenza testing ordered
- 01/08/18 3:14PM CNP notified that Resident #37 was positive for Influenza A. CNP ordered [osteltamivir].

01/09/18

- 01/09/18 9:29 AM Observation of Resident #37's room revealed no isolation equipment or isolation sign was posted to inform staff and visitors droplet isolation precautions were in place.
- 01/09/18 10:18 AM Resident #22 (roommate) exhibiting chest congestion with a productive cough and an elevated temperature. CNP ordered immediate nasal swab and ordered the resident be placed in droplet precaution isolation and start [osteltamivir].

01/10/18

- 3:05 PM LPN transporting Resident #22 in her wheelchair back to her room. She had been playing Bingo with 25-30 other residents.
- 3:10 PM Isolation PPE bag had been placed on the door to Resident #37 and 22's room. No sign indicating the residents were in droplet isolation precautions.
 - LPN # 28 indicated a piece of paper tape located near the top of the isolation bag served as the sign alerting staff and visitors.
- 3:45 PM Resident #22 nasal swab was negative for influenza.
- 4:10 PM Droplet precaution sign at door to the room
- 5:50 PM Resident #22 wheeling herself to dinner. Negative nasal swab indicated it was ok for her to be in common area.

01/11/18

- 4:30 PM The Medical Director said Resident #22 was placed on [osteltamivir] due to her roommate testing positive for Influneza A.
- The Medical Director indicated that since only one resident tested positive for influenza and no other residents were symptomatic there was no influenza outbreak and no further action was required.
- Recall that on 01/09/18 the CNP reported that Resident #22 was exhibiting chest congestion, an elevated temperature, and a productive cough.

CDC Guidance for Influenza Outbreak Management in Long-Term Care Facilities

- If two residents develop symptoms of influenza within 72 hours and one of the resident's tests positive for influenza an outbreak may be occurring.
- All non-symptomatic residents on the unit should start oseltamivir promptly for a minimum of two weeks.

Oseltamivir Dosing

Indication	Usual Dose
Treatment	75mg twice daily x 5 days
Chemoprophylaxis	75mg once daily for 2 weeks or 7 days after last known case <i>whichever is longer</i>

Oseltamivir Dosing

Indication	Usual Dose	Adjusted Dose	
Treatment	75mg twice daily x 5 days	CrCl 31-60	30mg twice daily
		CrCl 10-30	30mg once daily
		Dialysis	30mg after dialysis on dialysis days
Chemo-prophylaxis	75mg once daily for 2 weeks or 7 days after last known case <i>whichever is longer</i>	CrCl 31-60	30mg once daily
		CrCl 10-30	30mg every other day
		Dialysis	30mg after every other dialysis